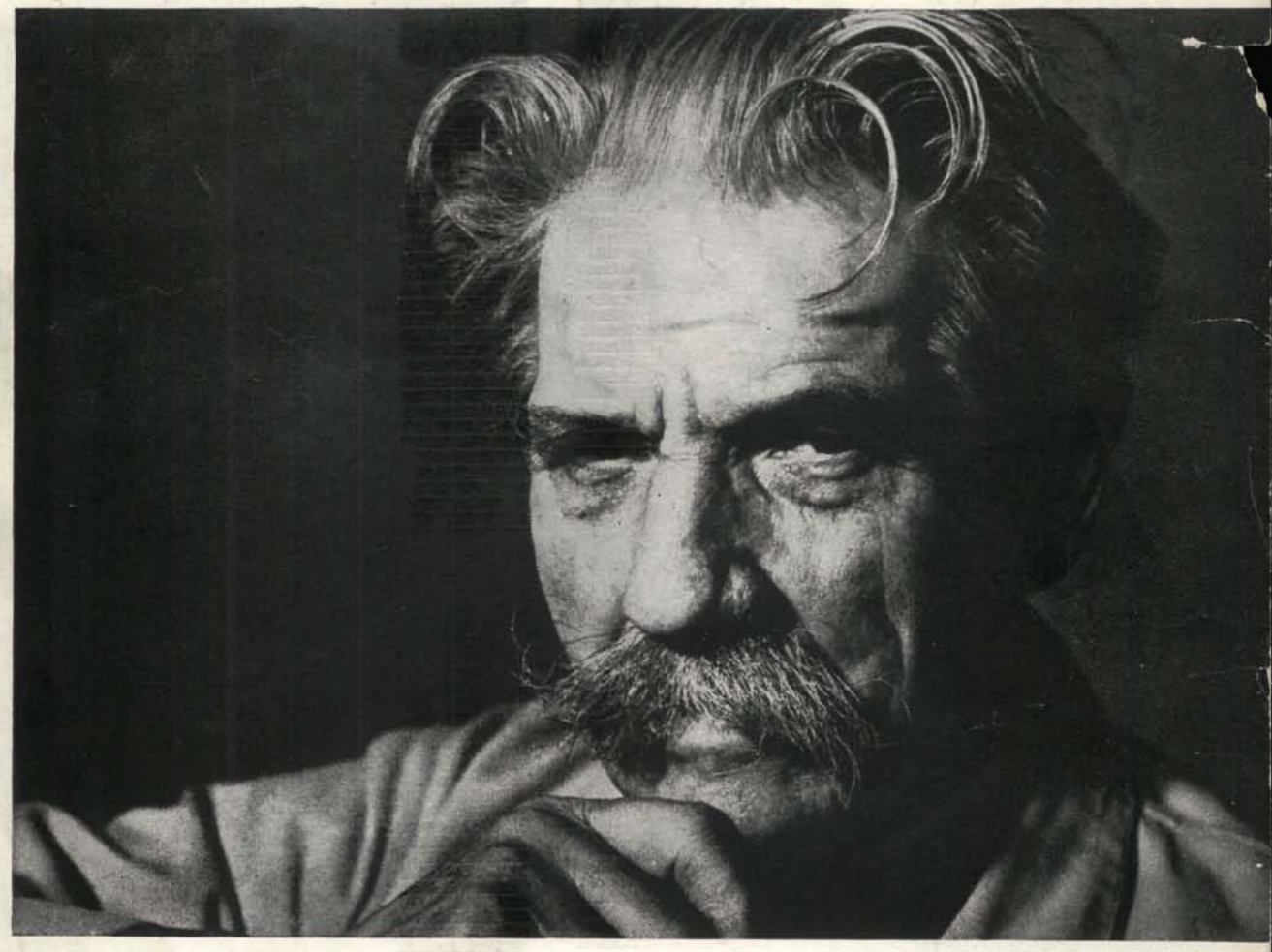
ANC

Saturday Review

JANUARY 5, 1957 / 20¢



Albert Schweitzer, hero of a new documentary. (See SR Goes to the Movies)

SR/RESEARCH
SCIENCE & HUMANITY

A Science Report:

WHAT HOPE CAN DO FOR MAN... by Dr. Harold G. Wolff

DIALOGUE ON INDIA: CHIEF JUSTICE WARREN & CHESTER BOWLES

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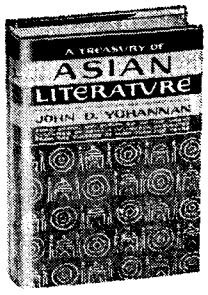

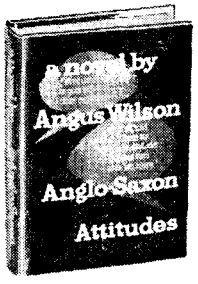

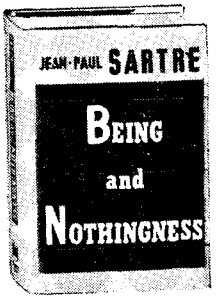

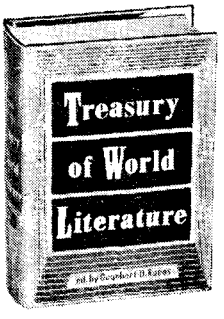

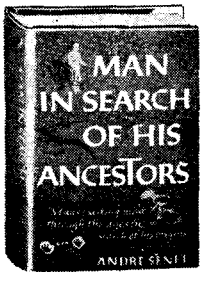

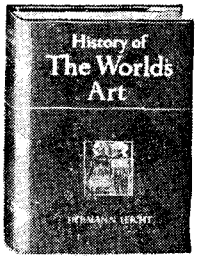

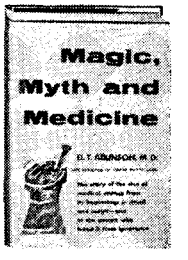

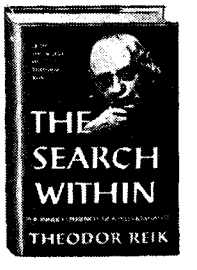

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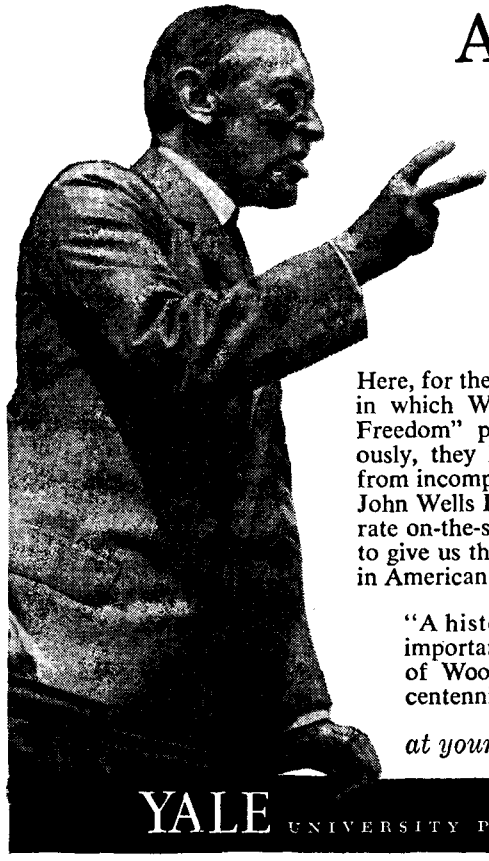

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THE SATURDAY REVIEW, published weekly by Saturday Review, Inc., 25 W. 45th Street, New York 36, N. Y. E. De Golyer, Chairman of the Board; Harrison Smith, President; J. R. Cominsky, Publisher, Executive Vice President and Treasurer; Norman Cousins, Vice President; Nathan Cohn, Assistant Treasurer and Business Manager; Robert A. Burghardt, Advertising Director; Bert Garmise, Circulation Director; Ray Goodman, Circulation Manager; Marion Urmy, Assistant to the Publisher. Subscription $7 a year; $8 in Canada. Member Audit Bureau of Circulations. Printed in U.S. Vol. XL, No. 1, January 5, 1957. Re-entered as second-class matter January 11, 1952, at the Post Office in New York, N.Y., with additional entry at Philadelphia, Pa., under the Act of March 3, 1879. Indexed in the "Readers Guide to Periodical Literature."

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TRADE Winds

PAUL HUME, MUSIC EDITOR of *The Washington Post* and collector of irate letters from Presidents, has a wonderful title for a piece he wants to do about Julie Andrews of "My Fair Lady" fame: "Lady Loverly's Chatter." . . . Archie Ogden, meanwhile, has been hob-nobbing with a shepherd who has taken Nancy Mitford's latest book very much to heart, and has divided his flock into two sections: ewes and non-ewes. . . . And to conclude this paragraph and get on to weightier matters, Peter Windsor insists he has read "The Last Hurrah" three times. That makes him an O'Connorseur.

ALMOST AS DISTURBING to Yale graduates as the December headlines was the rumor (since officially denied) that Old Eli was going to throw open its doors to female undergraduates. Indeed, John E. Robson, '52, rushed into print in the *Yale Alumni Magazine* with a poem which I happily reprise here:

Gentlemen:

Can it be true what people say—
That Yale's admitting girls?
Will floors of campus barbershops
Be littered now with curls?
Will all Yale's ivy-covered peaks
Soon echo with their strident shrieks,
And chapel bells forever after
Compete with screams of distaff laughter?
Will windows now in future springs
Be hung with dainty underthings?
"Bright College Years" three octaves higher?
Our fiscal need is not *that* dire!
Will not our manly intellects
Be clouded o'er with thoughts of sex?
And possibly, in future years,
The football team will wear brassieres?
Oh, comfort me and reassure
That Yale will not become impure!
If so, this vow I leave you with—
I'll surely send *my* son to Smith.

IN "THE WORLDLY PHILOSOPHERS" Robert L. Heilbroner tells about the time in the 1860s when Cornelius Vanderbilt discovered that some of his closest so-called friends were planning to doublecross him in the stock market. He promptly sent them one of the shortest ultimatums in history: "Gentlemen: You have undertaken to ruin me. I will not sue you, for law takes too long. I will ruin *you*. Sincerely, C. Vanderbilt." Adds Heilbroner, "He did, too." . . . *Time* magazine's nominations for best-known mythical birds of the year: The No Left Tern, the Extra Marital Lark, the Ruffled Spouse, the Base Canard, the Vested Interest, and the Buff-tinted Due-bill. . . . With funds provided by the Ford Foundation and Princess Ashrof, who is, I'm sure you know, twin sister of Iran's Shah, scholars now are busy translating the Columbia-Viking Desk Encyclopedia into Persian. Next year, predicts Viking's dreamy-eyed publicist, Omar will be lounging beneath a bough with his jug, his Thou—and the Persian CVE, in which, of course, he'll be reading about himself on Page 719. . . . February 1, 1957, marks the publication of another sure-fire best-seller by Frances Parkinson Keyes. "Blue Camellia" is its name, and its locale is the rice-growing country in Louisiana. Mrs. K. has maintained a residence in Crowley, La., for years doing research on this book. It was there that your reporter gently but firmly removed a cat from the distinguished authoress's lap—a plain case of a Kitten off the Keyes.

CAMPUS SAGES . . . At the University of Michigan Ben Fairless opined, "Speakers have been showering us with pearls of wisdom for centuries, and if all their valuable advice were laid end to end, it would still be just as good as new. Very little of it ever has been used." . . . Home economics prof at Arkansas: "If you don't want your children to hear what you're saying pretend you're talking to them." . . . For its twentieth reunion, the class of 1936 at Princeton compiled some unusual statistics. In 1956, for instance, the class as a whole weighed three and a half tons more than it did at graduation. Oh, that easy living! . . . Advice to an economics class at Reed: "It pays to live within your means. Remember, a small part of what you earn still belongs to you!" . . . The philosophy of Michael Todd, expounded to a group of UCLA students (plus Elizabeth Taylor): "I've been broke many a time but I can honestly say I've never been poor. Poverty is a state of mind. When you start thinking with your wallet you're always wondering what you can't do instead of what you can do, and you're never going to get off your back." . . . A Columbia sophomore asked a visiting French author, "How would you say American girls stack up against the French mamselles?" Answered the Frenchman enthusiastically, "I think they're equally well stacked!"

WOULD A FEW TRADE WINDS readers like to do a good deed to start the new year off right, and give me a helping hand with an anthology I'm beginning to assemble for publication by Harper's in the fall? It's to be called "Reading for Pleasure," and in one respect at least it promises to be a very disorderly anthology indeed: the only rhyme or reason for the contents will be that I happened to enjoy them very much.

No two people agree more than

Your Literary I. Q.

Conducted by John T. Winterich

PAINTER INTO BOOK

Each of the following is the title of a novel based on the life of an artist, or the title of a biography of an artist. Helene Nitzsche of Maquoketa, Iowa, asks you to identify each artist, pair the title with its author, and state whether it is a novel or a biography. Answers on page 33.

1.	"L'Oeuvre"	( ) W. Somerset Maugham
2.	"Man of Fire"	( ) Carl J. Spinatelli
3.	"Droll Peter"	( ) Lion Feuchtwanger
4.	"Bird of God"	( ) Felix Timmermans
5.	"Moulin Rouge"	( ) Virginia Hersch
6.	"Lust for Life"	( ) Darrell Garwood
7.	"Artist in Iowa"	( ) Virginia Hersch
8.	"The Florentine"	( ) Carleton Mabee
9.	"The Masterpiece"	( ) MacKinley Helm
10.	"This Is the Hour"	( ) Pierre LaMure
11.	"To Seize a Dream"	( ) Irving Stone
12.	"American Leonardo"	( ) Ira Wallach
13.	"In the Blazing Light"	( ) Emile Zola
14.	"The Moon and Sixpence"	( ) Max White
15.	"The Horn and the Roses"	( ) Emile Zola

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A NEW FORM FOR TRAGEDY

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Seen the Pulitzer Prize Play the Diary of Anne Frank? Anne was one of these girls in Camp Westerbork barracks, outside Amsterdam.

Drawing by New York artist Gloria Gentile, from genuine photographs, which can be seen at bookstores listed below.

THE STORY: Wartime Amsterdam 1942-44. The Nazis are deporting the Jews, and many (like Anne Frank) are in hiding. A kind Dutch surgeon shelters in his home: A German Jewess, formerly famous as a university teacher of philosophy and lecturer, now a Catholic nun; an Orthodox Jew and his little family; a young philosopher-writer whose blond hair and Aryan features permit him to wander about the city fearlessly; and his dancer wife. The Orthodox Jew *cannot abide the converted Jewess*, his hostility alienates him from the whole household; the dancer makes several attempts at suicide, defends her right to dispose of her life as she sees fit. The nun, who comes to love the girl (readers have been fascinated by their strange mother-child relationship) cannot permit a mortal sin, even when she becomes aware that the alternative is Auschwitz.

Scott Meredith, famous literary agent, says of this new book: *'It is calm, honest and authentic. You have fine material in the story of the nun and her conflicts with the other hidden Jews, and you give the reader a picture of life in Amsterdam that hasn't been presented before.'*

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occasionally on a story or special section of a book that is just exactly right—something to relish at the moment, then tuck away for future rereading at will. But I *would* like to hear of some great favorite of yours that's out of the general run and that you think might be just my meat, too. I'm so tired of seeing the same old stories trotted out for anthology after anthology, and though I suppose a few of them are inevitable, it would be nice to serve up a relatively fresh and unhackneyed menu for a change, including a few stories the most avid reader may have overlooked previously. I think I've got a score or more of such prizes already lined up; a few more from you would provide icing for the cake.

Tell me, if you will, the name of the story, the author—and where I can find it. Address me at my office (Random House)—and accept my heartfelt thanks in advance.

LEST YOU FEEL TOO SORRY for poor, downtrodden book publishers, Macmillan reported for the six months ending October 31 net sales of $10,-197,211 and net income of $1,058,366. How much of all that swag was produced by the textbook department, and how much by the tradebook division, is a secret known only to Macmillan.

Certainly the sales manager of a much smaller concern, with no textbook department at all, had no such balance sheet to cheer his soul. He was going over his salesmen's expense accounts one morning, moaning and tearing his hair, when he suddenly came to one that made him yell for his assistant.

"Just look at this!" he demanded. "How can you spend nine dollars for food in a single day in Sandusky, Ohio?"

"It's easy," answered the assistant cheerfully. "You just skip breakfast."

—Bennett Cerf.

FRASER YOUNG'S

LITERARY CRYPT NO. 706

A cryptogram is writing in cipher. Every letter is part of a code that remains constant throughout the puzzle. Answer No. 706 will be found in the next issue.

ZRDDBIC OBL LRFRI ZR

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Answer to Literary Crypt No. 705

No man can be a patriot on an empty stomach. —W. C. Brann.

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The Saturday Review

JANUARY 5, 1957

DIALOGUE ON INDIA

A Great Friend's Future

Governor Chester Bowles.

—Wide World.

Chief Justice Earl Warren.

EDITOR'S NOTE: *Prime Minister Nehru of India has just completed discussions with President Eisenhower on the future of Indian-American relations. His visit dramatized the community of interest which exists between the two peoples. To some Americans India is still a hot, dry peninsula isolated from the mainstream of modern history by towering mountains, jungles, and steaming sea. But others see India as the flywheel of our times. Her problems model the problems of the whole "underdeveloped" world: rapid industrialization in an overcrowded land, political experiment, popular clamor for the "good life," the choice between Communism and democracy.*

What about Nehru? What about India? To shed light on these urgent questions The Saturday Review *requested Chief Justice Earl Warren and Mr. Chester Bowles to hold a "conversation on India." Mr. Justice Warren has recently returned from a tour of India where he was able to observe the new constitutional government. Chester Bowles, formerly governor of Connecticut, served as Ambassador to New Delhi from 1951 to 1953.* SR's *William D. Patterson moderated the discussion.*

GOVERNOR BOWLES: I believe that the most important meaning India has for America right now is that India is giving democratic political principles their first major test in what we call an "under-developed" country.

We Americans have made democracy work effectively, although, even with the advantages of an empty continent and abounding resources, we have often had our difficulties. But the troubles of India are infinitely more complex: poverty, illiteracy, and a vast population speaking many different languages.

Justice Warren, you were there just this last September. What were your impressions?

CHIEF JUSTICE: I was greatly impressed by the number and size of their problems, by the prodigious efforts of Prime Minister Nehru and his Government to solve them, and by the importance of India to the peace of the world. Our problems appear simple by comparison.

My embarrassment was complete when I realized how little not only I but most Americans know about this great land and its importance to the world. It has 370,000,000 people with a standard of living that is unbelievably low according to our standards. Because of lack of industry, the vast majority of them are forced to live off a land one-third the size of our country, and impoverished by centuries of primitive farming that is not unlike that of Biblical days.

We should know much more about India, but unfortunately we have never oriented our thinking toward Asia, where such a large percentage of the people of the world live. We are taught little about it in our schools, and our news has always been oriented toward other parts of the world.

We know that for many decades India has been a Crown Colony, and before that was steeped in feudalism and occasionally invaded by some foreign power. But what we forget, or rather what we have never learned, is that in the past eight years India has emerged from all this and is now the most populous Republic of the world—that it has a Constitution based upon the identical principles of our own and that her leaders are engaged in perhaps the greatest govern-

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mental undertaking of all time: to solve these ancient problems during world crisis through free institutions in a manner that will both raise the pitiful standard of living to a level of decency and at the same time develop the country economically so it can be on a sound and self-reliant basis.

GOVERNOR BOWLES: The Constitution of India was largely written by an Indian graduate of the Columbia Law School, Mr. B. R. Ambedkar, who was an Untouchable. It is true, is it not, Justice Warren, that their Constitution is much longer and more precise than ours?

CHIEF JUSTICE: Yes. The Constitution of India is very much like ours in content but considerably different in form. Our Constitution was drafted in general terms in order that the Government might not be strait-jacketed and so it could meet changing conditions in the growth of the new country. It contained only 5,000 words. The Indian Constitution, however, was drafted in time of crisis, and their Founding Fathers were obliged to make provision for age-old problems which had accumulated through the centuries and that could not be ignored at the moment. As a consequence, the Indian Constitution is as specific as ours is general. There may be great difference of opinion as to which of the two methods is the better, but I have been wondering recently what our Founding Fathers would have done had they been confronted with like conditions.

I spent much of my time in India with the courts, the bar, and the law schools. I was invited to India for this purpose. To my amazement, I found how much their Constitution is like ours. I was greatly impressed by the similarity in the administration of justice in the United States and India. The Indian judges and justices of the Supreme Court and High Courts are dedicated to the rule of law as we are. They protect civil liberties with the same fervor that we do. They are thoroughly independent as we are, and they guard zealously their Constitution as we do. The bar is not only independent but militant, and they fight for the rights of the individual precisely as our bar does. It was doubly interesting to me because all of their proceedings are in English and because I saw in every courtroom, on the bench and at the counsel table, volumes of our Supreme Court Reports, which were cited, discussed, and quoted by the courts themselves.

I found a tremendous interest in American Constitutional law and sensed the feeling on the part of both the bench and the bar that they and we are pursuing a common course. Upon reflection, that is not as unnatural as it might seem, because both countries served an apprenticeship in the English common law to the extent that it has become ingrained in us.

GOVERNOR BOWLES: I have always been impressed by the real respect Indians have for the law. There is great pressure in India, for instance, to expedite land reforms. India has tens of millions of small farmers, most of whom still rent their land from large land owners who often charge oppressive rates.

In trying to establish a system which was less unjust the Indians ran straight into provisions in their Constitution which tightly protected property rights against government seizure without reasonable compensation. The whole movement of land-reform was held up for three or four years, amid—as you can imagine—the most tremendous political hullabaloo.

Here was a profound test of dedication to the principles of law. Nehru stood firm. He said, "This is our Constitution, and we must operate within it. If the legislation we have passed is not constitutional, then we have got to go back and work it out again." That's what they did. Now the land-reform operation is moving rapidly ahead in a form acceptable to the Supreme Court.

But in my opinion, the most impressive feature of the Indian Constitution is its absolute insistence on civil rights—freedom of religion, for instance. There are hundreds of sects and cults and religions that dwell side-by-side in India, for the most part with tolerance and mutual acceptance. The Moslems and Hindus who fought so bitterly against each other in 1947 are reconciled to a large degree now. What is most important is that the Indian Constitution gives absolute and equal protection to every group and it is generally respected.

I was in India in 1951 and 1952, during the first national elections. Here was another test of the Constitution. Once the Constitution had been established, many people urged Mr. Nehru to postpone these elections for a number of years until the country was firmly on its feet. He said to them, "If we are ever going to swim we have got to start to swim now. No one can be sure that a democratic election is going to work, but we have got to try."

One hundred million people voted. This is 66 per cent of the eligible voters, roughly the American ratio in our 1956 election. By and large they voted thoughtfully and responsibly. They took the plunge, and they were soon successfully swimming.

CHIEF JUSTICE: Yes, the Indian Constitution and the courts insist on civil rights as we know them, and they seek to perpetuate them through free elections such as that of which you spoke. When I was there they were already preparing for their election to be held in February 1957, and they are determined to improve their electoral system. I presume that the election they held four years ago was the largest election ever held in the world. One hundred million people voted. It took them more than two months to record the results, but it was a free election which registered the will of the people. In the coming election they propose to record the results in half the time, and as time goes on to have an election that lasts only one day and records the votes immediately thereafter. I was told by Prime Minister Nehru that they are to have about a million-and-a-quarter polling places and they expect at least two-thirds of the 200,000,000 qualified voters to vote.

GOVERNOR BOWLES: Government crews traveled from village to village and area to area. After he voted, each voter was stamped with indelible ink on the wrist to make sure he did not vote twice. What a wonderful thing it is to see our traditional democratic methods being used with such enthusiastic improvisations! Every one who has faith in self-government has a stake in the success of the Indian democratic experiment.

Justice Warren, did you hear much of the Gandhian movement?

CHIEF JUSTICE: Indeed, I did. The Indian people are devoted to the memory of their beloved Mahatma Gandhi, and they do their best to follow his teachings. To me, it is one of the most hopeful signs I have seen in the present turbulent world. Here we find almost 400,000,000 people who believe in peace based upon non-aggression and whose greatest hope is that such a peace can be established everywhere.

GOVERNOR BOWLES: I think that one reason why Indian leaders, however belatedly, came to understand the red nature of the upheaval in Hungary was the stories that began to come out after the first bitter fighting of passive resistance all over the country, factories shutting down for two or three days, an hour of complete immobility when no one was on the streets. It was almost a Gandhian response.

CHIEF JUSTICE: While there and since I have done a good bit of thinking

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about the origins of these two nations —India and the United States—and how different the problems of the two countries are. They were both colonies at one time, and both made a fight for independence and freedom. Ours was through a Revolutionary War; India's came through passive resistance. But we both achieved our independence and recorded the principles, upon which we were determined to be governed, in a written Constitution guaranteeing democratic processes based upon universal suffrage. However, then the differences began.

The United States started out with about 3,000,000 people in a thin line of settlements along the Atlantic Coast. These new states bordered on a vast wilderness—a whole primitive continent of untold wealth that was open to exploration and occupancy. There were no powerful or warlike neighbors to disturb us in achieving our destiny. India, on the contrary, did not achieve her independence until she was already one of the oldest civilizations on earth, until she was a nation of 500,000 villages and cities and a population of over 350,000,000 people. Most of these people were on a standard of living which is just one step ahead of starvation. On her borders were countries as poor and as congested as she was. There was no opportunity for territorial expansion if she had desired to have it. All her development must be internal. Personally, I feel that in this grave situation which confronted her, and divided as she was by racial and religious barriers and hundreds of different languages, she is making great progress. I came away with the feeling that if the rest of the world could only understand the problems of India and the necessity for solving them in the near future, and at the same time would be willing to be patient and tolerant of her efforts, the likelihood is that India will not only succeed in her own struggles but will go on to teach us all something about democracy and a free way of life.

GOVERNOR BOWLES: How very right you are. The best and biggest contribution the Indians can make to world peace and our security is their own success. And patience and tolerance—as you say—is what we need to learn. Right now the Indians are concentrating on their own internal development. They have to. And while they're working so hard to relieve poverty, to develop an adequate education system, a public-health system, land-reform and agricultural improvement, naturally they adopt sometimes the same rather isolated view that we had in the early days of our own expansion.

We Americans should remember the days when dictators were loose in Europe and we insisted that their aggressions were none of our affair. We were inclined to think the British were more nearly right than their adversaries, but some Americans weren't even too sure of that. Then, later, we discovered that we *were* involved because our security was tied tightly to that of the European democracies. Our European friends who held off the dictators while we looked the other way were as impatient with us then as we are with the Indians today.

CHIEF JUSTICE: There is a similarity between the Indian situation and ours in 1796 when Washington, in his Farewell Address, urged us to be friendly to all nations but to ally ourselves with none. We were then poor, as India is today. We had no military establishment as they have none. We did not have the means to maintain a military establishment; neither does India. We could only make a show of it if we desired by taking food out of the mouths of our own people. This we did not do; this India cannot do because so many of her people are very close to starvation. They need every dollar they can get in India, not only to keep body and soul together, but also to apply to development work which will create jobs, improve the productivity of the soil, develop industry, which is painfully absent now, and thus raise the general standard of living. The great problem in India is to divide their very limited funds between these two objectives. Also the situation of India today and ours of 175 years ago are similar in that both countries wanted nothing more than to live at peace with all countries of the world.

GOVERNOR BOWLES: One event that tremendously impressed me was the Bandung Conference, where the whole Africa-Asia world came together. On the 18th day of April 1955 President Sokarno of Indonesia opened the conference by reading "The Midnight Ride of Paul Revere," because this was the anniversary of the first battle in the first successful war of independence in modern times—the Battle of Lexington.

The delegates went on in the following week to discuss all the issues and problems in this vast area. The resolutions passed by the conference involved four basic concepts: the dignity of man regardless of race, creed, or color; an end to domination of one people by another; expanding economic opportunity broadly shared, and peace.

These ideas are familiar to every American. They aren't Marxist or foreign, or strange in any way. This is Jefferson and Lincoln and Wilson and all the great minds of our own American past.

As a matter of fact, one of the greatest tributes that could be paid to these ideas has been paid by the Communists. They tried to steal them.

CHIEF JUSTICE: I saw no evidence of Communism in India that alarmed me. I saw a very few outdoor gatherings where someone was haranguing a crowd under a Communist banner, but there is such congestion in India that anyone can gather a crowd, and I saw nothing which looked like enthusiasm in the gatherings. Also in the Parliament, which has a smattering of Communists and Communist sympathizers—I believe about twenty in all out of more than 500—they made no impression; in fact they appear extremely weak. In the Indian Parlia-

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ment each day there is a question-and-answer hour, and the responsible members of the Government are obliged, under the Constitution, to answer the questions of any members of the Parliament concerning the operations of the Government. On the day I attended Prime Minister Nehru took the floor, and when the Communists tried to badger him, as they do everywhere, he answered precisely and crisply to their discomfiture. The hour ended in some confusion for the Communists and their sympathizers. In all of my visits with the courts and the members of the bar, not only did I see no Communistic manifestation but a repulsion to it.

GOVERNOR BOWLES: The Communists are a small minority, although very noisy. As a matter of fact India has a far smaller ratio of Communists than France or Italy, and they aren't at all effective. Sometimes I think that one reason why India sometimes shows a lack of understanding of the dangers of international Communism is because her own domestic brand is so feeble. We Americans, on the other hand, have had to cope with Communism where it wasn't at all feeble, in China, Russia, and parts of Europe.

CHIEF JUSTICE: The Communist outdoor meetings I saw did not impress me, and I have the feeling that if India can just make reasonable progress in raising the standard of living, Communism will have little appeal to the people. They love the land. They are attached to it. Their greatest hope and ambition in life is to own a little part of it for their families and themselves to farm as their fathers have done and to trade their produce. That is the opposite of Communism.

GOVERNOR BOWLES: As long as India continues to build and develop and grow the Communists won't make much progress. Of course, as more Indians become literate, healthy, and raise their sights as to what they want out of life, they'll become aware of injustices and may become restless. But one of the most reassuring qualities in Indian politics is the common understanding that progress is not simply a material matter of bodily wants, clothing, dams, and factories. It also involves the individual citizen's sense of participation and sense of increasing justice. If India survives as a free nation, and I believe it will, it will be not only because she is able to ease her poverty, but because she does so in a way that awakens a response and an enthusiasm in the people.

CHIEF JUSTICE: It will not be easy because there is colossal misery in parts of India. The refugee problem is heart-rending. When I was in Calcutta, where thousands of refugees continue to come each month, I saw hundreds of families living in places no larger than a desk. Their little shelters were crowded so closely together that one could hardly walk between them. More and more are coming every day. There are no jobs for them to go to, and the Government has an overwhelming job in trying to take care of them either through relief or locating them in a manner which will make life tolerable.

When a government is trying so hard to maintain free institutions under these conditions it calls for the sympathy of the world. We must be tolerant of mistakes which, of necessity, will be made or claimed to have been made. After all, helping India solve her problems will help us to solve some of our own. India, being dedicated to peace, can be a great force for good in the world. The Indian people are by nature a peaceful people. Their philosophy of life is a peaceful one. To have this great nation in the center of Asia dedicated to free institutions and peace is about as important to the world as anything of which I can think.

GOVERNOR BOWLES: India will influence other continents, too. When an Indian leader speaks for moderation in Africa and an orderly progression from colonialism to freedom it carries conviction. When we or the British point out the dangers of too sudden a break Africans think of us as typical Westerners trying to hold them back.

Woodrow Wilson used a phrase that many cynics scoffed at, "to make the world safe for democracy." Yet that must be our objective. Democracy can never survive if it is confined to two or three countries—large or small. It will only live if it is accepted by more and more people all the time.

It must become the most vital of all the political philosophies, so that countries-on-the-march in Africa and Asia will look to it as the one political technique through which they can achieve both prosperity and freedom. If, on the other hand, the influence of democracy shrinks into a smaller and smaller area, we will eventually be defending a kind of garrison state here in America.

This, as I see it, is the real importance of the Indian experiment. If the Indians can make democracy work, their achievement will critically influence the whole "underdeveloped" area. The Indonesians will take heart, the Burmese, the Japanese; the message will reach deep into Africa.

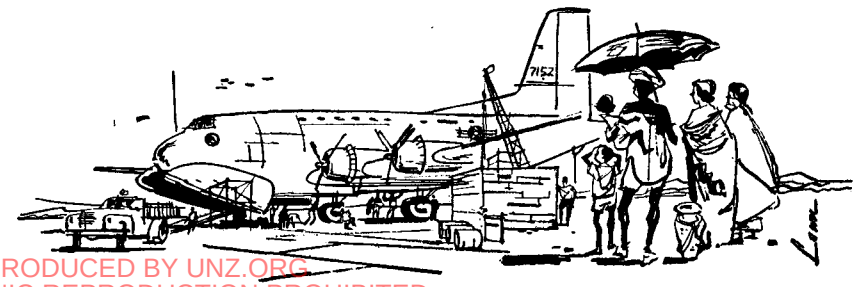
CHIEF JUSTICE: And it is a mistake to expect all of them to practise democracy exactly as we do. There are as many democratic ways of getting things done as there are uses of the imagination and vision. Free government is not so much a question of the form of institution as it is a way of life of the people. If a proper way and spirit of life prevails, free government can prevail through any one of a multitude of forms, and there is no reason why the United States cannot live alongside other democratic states —however different their approaches may be—in complete understanding and with mutual helpfulness. We sometimes forget that mere forms of democracy do not insure either success or stability. Before the Birth of Christ there were a score of democracies located around the Mediterranean. They all died. Rome lasted the longest because it was dedicated to the rule of law. But they all started to decline when their people lost interest and faith in them, and died when self-discipline died.

GOVERNOR BOWLES: Gandhi was aware of the political necessity of faith. He insisted that India must become free without violence, and that in order to succeed with such a difficult and unusual program the Indian people must become more worthy.

He continually scolded them. If violence occurred in the middle of one of his campaigns for self-rule he would immediately call a halt. He'd say, "You must learn how to live with one another. You must get rid of untouchability. You must clean up your villages. You must learn to love your neighbor. You must even learn to love the British."

Only when he decided the Indians had taken his teaching to heart would he start to press the British again. He particularly wanted to build from the village up to encourage the ideal of a free people living together. He was

(*Continued on page* 34)



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SR's *Book of the Week:*

"THE SEVEN CAVES"

Author: Carleton S. Coon

By CLYDE KLUCKHOHN

UNTIL this week the reader who wished to inform himself about archeology had ordinarily to choose between popular compilations —some of them very good, others quite dreadful—and turgidly written monographs stuffed with a welter of detail which only the specialist could sort discriminatingly. The single outstanding example of a book of wide scope for a general audience by an eminent practising archeologist was Gordon Childe's "New Light on the Most Ancient East." Even this has its limitations, for Childe is detached and austere, and his readers are rewarded only if they have a rather passionate interest in history and archeology.

Now Carleton S. Coon, a leading archeologist, comes along with "The Seven Caves" (Knopf, $5.75) and sets a new and very engaging pattern. He gives his readers plenty of facts, some of them dramatic, but interlaced with plenty of interpretations, some of them bold. His readers at the same time will be caught by Mr. Coon's contagious sense of adventure, will be disarmed by Coon's candid disclosure of his public announcement (and private communication to the Shah of Persia) of incorrect conclusions, and will be amused and instructed by the vivid tales of the public relations and personnel problems of the archeologist in the field.

For the public the book has an additional value. Archeologists have a habit of publishing their results ten or fifteen years after they have done their diggings. Mr. Coon's first excavation here reported took place only as long ago as 1939; his most recent finding was the determination, on June 6 last, of a date 43,000 years ago ± 2,000 years. This is, incidentally, the oldest date thus far established for a site once occupied by human beings.

Mr. Coon begins his book with an explanation as to why some people dig caves. This is primarily a succinct and well-considered statement of the scientific reasons, but it includes a diverting excursus upon personal and indeed psychoanalytic motivations. Then follow chapters on seven caves he dug up on plateaus, desert, and the Caspian shore of Arab lands from Tangier to Afghanistan. Each chapter covers the scientific context; the achievements, disappointments, and errors in excavation; the significance of the finds (sometimes a bit technically but intelligibly and pleasingly presented); the personal adventures of Professor Coon, his family and associates; the characters of such figures as Husain Ibish, One-Eyed Quasem, Big Absalem, and Inspectors Samadie and Mohammed Nader Khan. The final chapter fits the 150,000 pieces of flint and the human, seal, sheep, cattle, pig, horse, geese, and lion bones that he turned up in the seven caves into an overview of the 100,000 years of human history in the Middle East.

Mr. Coon also relates these Middle Eastern cultures—and still more the physical types associated or presumably associated with them—to the wider horizons of prehistory in Europe and the Far East. He considers himself a physical anthropologist—actually he is a representative of that waning species, the general anthropologist—and he disclaims full control of all the archeological specialties. I am not competent to assess the technical validity of all of his conclusions and interpretations but, in part on the authority of those Mr. Coon has consulted and with whom he has collaborated, I would think that most of his positions are as sound as any anthropologist can reach at present.

MR. COON leans toward the theory that Neanderthal men evolved from their European predecessors, but in a different direction from the ancestors of modern European man. He refuses to separate race from culture completely. He argues that the various flint-working techniques could have been communicated from one group to another in Old Stone Age times only on the basis of personal contacts. And, he writes:

> Once they had gone to this amount of trouble they certainly did more things with each other than chip flint . . . flint lessons were accompanied by race mixture. . . . Whoever the blade-makers were, they did not just teach a group of Neanderthals how to make blades and then skip away. They intermarried with the Neanderthals, and their hybrid children learned both techniques.

The book contains many excellent line drawings of flints, bones, stratigraphic sections, and the like. There are some good maps, though the location of the caves in relation to one another is not made as clear as one could wish. There are more than forty beautiful photographic plates, which are as interesting from the human as from the scientific point of view. This book is written in a consistently vigorous, though occasionally florid style. It should and certainly will reach many people who have never before done any serious reading on archeology.

—Dr. Philip Tobias.

Carleton S. Coon—". . . contagious sense of adventure."

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Our Clever Ancestors

"The Testimony of the Spade," by Geoffrey Bibby *(Knopf. 414 pp. $6.75), reports on the findings of archeologists in northern Europe and shows what influence these findings had on our cultural heritage. James B. Griffin, our reviewer, is curator of the Museum of Anthropology at the University of Michigan.*

By James B. Griffin

THERE are two stories in Geoffrey Bibby's "The Testimony of the Spade." One is an excellent popular account of the major stages in the long and ever accelerating growth of human culture in Europe north of the Alps from the earliest appearance of man to the Viking period. The other presents biographical sketches of some of the archeologists of the last 100 years and more who have added their contribution to the documentation of man's rise from his dim and distant past. These sketches not only enliven the book but give some understanding of the personalities of representative archeologists.

Mr. Bibby is a professional archeologist, and his interpretations of the meaning and significance of prehistoric cultures and the ancient human interrelations between geographical areas are in essential agreement with those of other informed students of European prehistory. Throughout the book there is clear but unobtrusive evidence that Mr. Bibby has made profitable use of the voluminous scholarship in many languages by hundreds of contributors. He also displays the insight and understanding which can come only from personal participation in a field of knowledge. His style is clear, simple, and flows smoothly. He tells his story in a stimulating, but never sensationalized manner. He has avoided the technical terms and detailed descriptions by which archeologists communicate with one another but which are "jargon" to the uninitiated. This is definitely not a college text—it is too lively and entertaining for that.

Some of the highlights of "The Testimony of the Spade" are the accounts of the preserved bodies of ancient Danes, some of whom really had their hides tanned; of the excavation and interpretation of Stonehenge, the most famous of the early pre-Christian "cathedrals" of England; and of the discovery of the magnificent wall paintings at Lascaux, the "Sistine Chapel" of fifteen millenniums ago in France.

From these pages the reader can obtain a clear picture of the variety of peoples who have contributed their blood to every modern national area of northern Europe. Many Americans are direct descendants of these prehistoric and historic Europeans whose way of life is vividly portrayed. Thus the beliefs and practices of these people form part of our cultural heritage. While it is true that our modern Western society has a strong debt to the cultural developments of the Mediterranean area, our ties to the peoples of northern Europe are even more direct.

Throughout the volume Mr. Bibby emphasizes the principles and practices of scientific archeology, showing how geology, zoology, botany, physical anthropology—even nuclear physics—have contributed to the reading of the prehistoric record.

HE ALSO makes plain that archeological research is significant not merely in the recovery of past human products for display in museums nor in the reconstruction of an ancient human society placed in its proper chronological position nor in the increase in knowledge of man's long rise to Parnassus. In Mr. Bibby's words, "The importance of the archeologist rests alone on his influence on the sum total of knowledge and feeling on which mankind bases its actions and reactions. One of the greatest advances of the past hundred years is that we have learned to see our achievements and problems in the perspective of a score of millennia full of achievements and problems, that we have assimilated into our consciousness the pride and humility of the realization that in times remote even by geological standards Europe was inhabited by men and women with an imagination and an artistic culture not inferior to our own, heirs even then to an unthinkably ancient way of life and way of thought." In a rational interpretation of man's history on earth the "spade" has become mightier than tradition, myth, and revelation.

It is only natural that a reader who belongs to the profession should find a number of statements and interpretations with which he disagrees. But on the whole the book is so sound in its factual data and so controlled in its presentation of the meaning of prehistory that minor quibbles over relative minutiae would be both unwise and unfair. If I have any major disappointment in this volume it is over the illustrations. In number, scope, and quality they are not comparable to the text. In spite of thirty-two fine plates, sixty drawings, eleven maps, and one chronology chart a more comprehensive portrayal of prehistoric products would have made possible a better realization by the lay reader of the several cultural stages Mr. Bibby presents in his always absorbing text.

—From "Testimony of the Spade."

Furnished House, Skara Brae—". . . man's rise from his dim and distant past."

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Science for Everyman

—"Secret of the Hittites."

HALF a dozen years ago book publishers began learning anew what they knew well in the Twenties, when "Outlines" of this, that, and every other science were at home on the best-seller lists: the American people are enormously curious to find out what science knows of the world they and their ancestors have lived in and will grasp for books that will tell them about it in language that they can understand. This rediscovery began slowly in 1951, with the publication of Rachel Carson's "The Sea Around Us" and C. W. Ceram's "Gods, Graves and Scholars." The first has since sold a total of 312,407 copies in all editions, the latter more than 100,000 copies in the regular edition alone. On this page is an annotated list of some of the better books that have followed in their train—books about archeology, geology, mathematics, and so on and on. Nor is the end in sight. The flora and fauna of the tropics and astronomy are just two new subjects among the many popular science books scheduled for publication during 1957.

GODS, GRAVES AND SCHOLARS. *By C. W. Ceram. Translated by E. B. Garside. Knopf.* $5.75. The story of archeology in vividly related episodes that make such episodes as the reading of the Rosetta Stone as absorbing as a suspense story.

THE BURIED PEOPLE: The Etruscan World. *By Sibylle Von Cles-Reden. Translated by C. M. Woodhouse. Scribner's.*

—*From "The Buried People."*

Veii Apollo—"journey to Etruria."

$7.50. A journey to ancient Etruria based upon evidence found in Etruscan tombs.

THE WORLD OF MATHEMATICS. *Edited by James R. Newman. Simon & Schuster. 4 volumes.* $20. A handsomely gotten up anthology demonstrating the many aspects of mathematics through excerpts from the writings of Archimedes, Lewis Carroll, Bertrand Russell, and many others.

THE MOUNTAINS OF PHARAOH. *By Leonard Cottrell. Rinehart.* $5. Accounts of the discoveries of the burial crypts of the Egyptian kings with special emphasis on the men who unearthed them.

THE SECRET OF THE HITTITES. *By C. W. Ceram. Translated by Clara and Richard Winsten. Knopf.* $5. The story of recent investigations into the civilization of an almost-forgotten state in fourteenth-century B.C. Asia Minor.

TOMBS, TEMPLES AND ANCIENT ART. *By Joseph Lindon Smith. University of Oklahoma Press.* $5. An informal account of the chronology and relation of ancient art as evidenced by excavations in Egypt and in ancient Mayan centers.

IN SEARCH OF ADAM. *By Herbert Wendt. Translated by James Cleugh. Houghton Mifflin.* $6.50. The history of man's attempt to find order and system in nature from Aristotle through the centuries.

LIFE, THE GREAT ADVENTURE. *By Jean Rostant and Paul Bodin. Translated by Alan Houghton Brodrick. Scribner's.* $3.50. The question of life's origin, evolution, and decline of disease are a few of the topics discussed in this laymen's book of human biology.

THE STORY OF OUR EARTH. *By Richard Carrington. Harper.* $3. Roughly a million years of plant and animal life, from the simplest organism to man, with considerable attention paid to the fossil world.

MAN IN SEARCH OF HIS ANCESTORS. *By André Senet. Translated by Malcolm Barner. McGraw-Hill.* $5.50. A smooth narrative technique makes the story of paleontology highly readable.

ON THE TRACK OF PREHISTORIC MAN. *By Herbert Kühn. Translated by Alan Houghton Brodrick. Random House.* $3.95. More information about prehistoric man with extensive sightseeing in the Ice Age caves.

THE WORLD WE LIVE IN. *By the Editorial Staff of* Life *Magazine and Lincoln Barnett. Simon & Schuster.* $13.50. *De luxe edition.* $15.50. All about the earth and its natural wonders from the illustrated articles which originally appeared as an impressive series in *Life.*

THE NATURAL HISTORY OF MAMMALS. *By François Bourlière. Translated by H. M. Parshley. Knopf.* $5. A comprehensive account of modern findings about the real behavior of mammals.

THE SEA AROUND US. *By Rachel Carson. Oxford University Press.* $3.50. The story of the sea through geologic time and the life that inhabits it, told by a woman who is both naturalist and biologist.

THE EDGE OF THE SEA. *By Rachel Carson. Houghton Mifflin.* $3.95. An informative and almost poetic exploration of life along the seashore, that fringe of land all over the globe which belongs not entirely to the sea and whose creatures are quite its own.

C. W. Ceram—". . . vividly related."

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Italy Only Yesterday

"A Light for Fools," by Natalia Ginzburg *(translated by Angus Davidson. Dutton. 256 pp. $3.95), is the story of two Italian families before and during World War II.*

By Thomas G. Bergin

AMONG the interesting aspects of Italian literature of the postwar period is the emergence of women writers to a position of prominence. There are now a good half dozen on the horizon who must be reckoned with in the assessment of significant contributions to the field of the narrative. Natalia Ginzburg is not the least of these, although she is not yet as well known abroad as she deserves to be. I am not sure whether "A Light for Fools," just published in this country, will do what it should for her "fortune," as the Italians call it. Let me add at once that this reservation implies no doubt about the quality of her writing or the validity of the content.

Her virtues are a sharp perception of the subtleties of emotional states and an unusual quality of terseness in setting forth her discoveries. Both are exemplified in the novel at hand, which deals with the affairs of two rather odd Italian families (but of course all families are odd if you look close enough) in the years of the war and those immediately preceding. It is quite a varied gallery too: the old man with his great book documenting the follies of fascism; the youth Ippolito, driven to suicide by the burden of his humanity; the busy Emanuale, slightly ineffectual; the elderly, eccentric, but truly Christian Cenzo Rena, and of course the girls. Anna, the younger daughter of the less prosperous family, has the major role. Concettina, to be sure, has many *fidanzati* and has to settle for one she doesn't much want; Anna, seduced by the spineless Giuma, winds up in the protective arms of the middle-aged Cenzo and learns to be happy there.

They add up to a picturesque group of irregulars, bound together by bonds that seldom find articulate expression, each character isolated—save in crisis when the bonds are felt—in his own preoccupations. In their emotional, unexpressed dependence on each other as well as in their spiritual isolation they seem to dwell in a nineteenth-century Russian novel rather than in twentieth-century Italy.

That does not of course make them less credible or less appealing. And the events of their times impinge on their personal vicissitudes in a way that no group of nineteenth-century characters ever knew. Most of the boys are engaged in the publication of a clandestine journal in the days preceding the war. When calamity comes and Italy goes in they follow their various destinies, some to Russia, some to North Africa. The boy Giustino, youngest in the cast, becomes a partisan, so does Danilo, Concettina's ex-fiancé. And Cenzo Rena ends as the good must end—though la Ginzburg is anything but an allegorical writer—paying for the crimes of others. At the end, the hurricane past, only three of the original cast are still together, "thinking of all those who were dead and of the long war and the sorrow and noise and confusion, and of the long difficult life which they saw in front of them now, full of all the things they did not know how to do."

The trouble is there are too many characters for the reader to focus easily. If this is Anna's story, then we would like to know something more about her than we get; if Cenzo Rena's, then we wish we could see him more often as he sees himself. A certain diffusion of interest (rather uncharacteristic of Ginzburg) mars the story as a work of art. As a "documentary" one can find no fault with it. The title in the original is "All Our Yesterdays," and Italian readers have found a good deal of their own history in the tale it tells. I think its success here will depend on how much interest American readers may feel in the color and pattern of the trying days which are evoked in these pages.

—*From the jacket of "Snow Country."*

". . . the bleak, other-side of Japan."

A Lonely World

"Snow Country," by Yasunari Kawabata *(translated by Edward G. Seidensticker. Knopf. 175 pp. Paperbound, $1.25), is a mood prose poem about a man and two women experiencing various kinds of love in a grim remote section of Japan.*

By Faubion Bowers

"SNOW Country," by Yasunari Kawabata, one of Japan's senior and most distinguished writers, is the latest addition to the lengthening list of Japanese novels translated into English by Americans and for American publishers. The translator in this instance is Edward G. Seidensticker, an expatriate living in Japan and earning his living in the main by his translations. Mr. Seidensticker's earlier translation of "Some Prefer Nettles" did not particularly catch on with the American public. However, in "Snow Country," altogether a better, if shorter, book, Mr. Seidensticker has excelled himself. He has delicately turned into English (except for an irritating repetition of the word "presently") some of the most fragile and evanescent prose ever written in Japanese. As Mr. Seidensticker explains in his simple but authoritative introduction, Kawabata belongs to the school of understated, suggestive, and staccato writing of *haiku* poetry. The fragmentary quality of those tiny seventeen-syllable poems extends to the

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incident and structure of Kawabata's novel itself.

"Snow Country" deals with three characters, a man and two women. Its setting is the bleak, other-side of Japan in the mountains along the Japan Sea, utterly different from the more familiar and tourist-traveled sides of Tokyo and Kyoto. It is cold in the snow country. There is skiing. There are hot baths. There are geisha and hotel maids, both of whom are greatly looked down on in contrast to their big city counterparts on the opposite side of Japan. The resorts themselves, too, are totally unfashionable. There are few travelers or customers. It is a lonely world.

The fly-leaf describes the theme of "Snow Country" as "the possibility of love in an earthly paradise." It also adds, "Does the perfect fulfilment of sensory pleasure nourish love or does hedonism defeat itself through satiation . . . ?" I must admit that I did not find this theme. In fact, there seems to me to be no theme at all—only some of the most beautiful and perfect mood writing I have ever read, and all expertly conveyed into English. The first half of this short book, which is far better than the last half, is curiously prurient—the hero and the heroine, if so attenuated a plot can have heroes and heroines, spend their time in bed, talking and drinking water (only to sober up with) and finally turning out the lights. It is clear that the girl loves the man. It is eminently doubtful whether the man reciprocates that passion. In the second and final section the other girl, with whom the hero has exchanged scarcely a word, is destroyed in a fire (how the Japanese love to write about fires; and how well they do it!). At the end of the novel the reader doesn't really know what has happened. Is the other girl dead? Will the hero and heroine go off together and leave the hot spring and the snow country, which grow more depressing and squalid with each page? Or does nothing happen, or will ever happen?

Writing about "Snow Country" (or almost any Japanese novel for that matter) is deceptive. In critics' words and hands the novel sounds uneventful, unimportant even. But such an impression is not correct. "Snow Country" is an experience. A reader is changed and moved by it. Somewhere in the depths of his mind he will find he has lived in that cold, snowy air, seen the landscape, stopped over in the inns, spent the night with the geishas, and even longed for the spring that seems so far away. Somehow the reader ends by understanding far more than ever comes to words in the pages of this fine novel.

Behind the Secret Door

"The Green Kingdom," by Rachel Maddux *(Simon & Schuster. 561 pp. $4), is the tale of five Americans who find a magic land somewhere in the Western mountains.*

By Ben Ray Redman

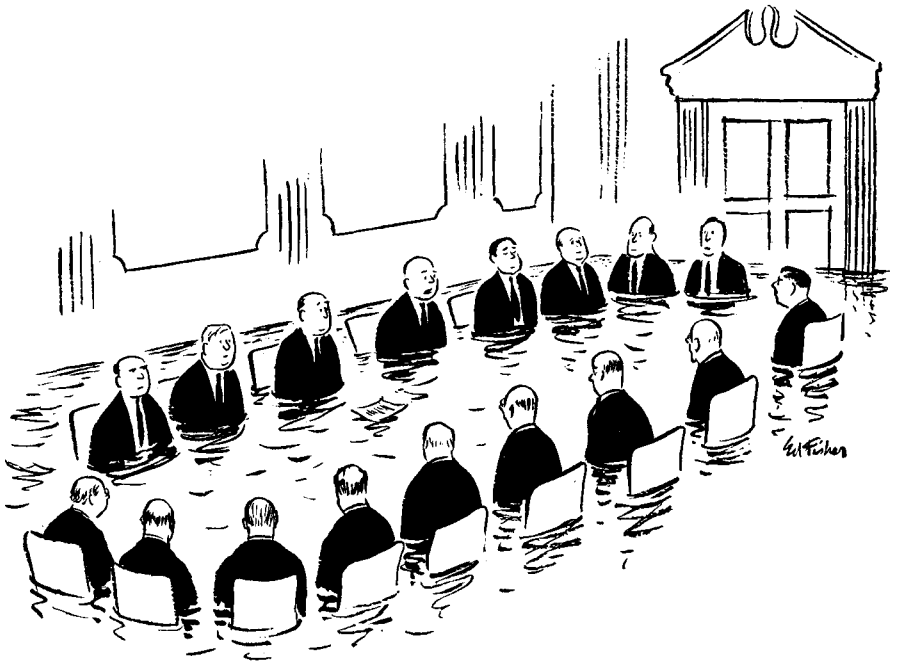
THE THEME of the secret door that leads into a secret garden or a hidden world is as old as the imagination of childhood and as new as the newest novel, and its attraction is eternal. In "The Green Kingdom" Rachel Maddux takes us through this door once again. This time it is a rocky cleft somewhere in our Western mountains that opens and closes every ten years; and we make the journey in the company of five men and women who, with no more than a roughly sketched map and a drunken grandfather's story to go on, set out to find a fantastic green land in the existence of which they only half believe.

They are a mixed lot, these five—Justin Magnus, a successful composer, with a full lifetime already behind him; Erma Herrick, an attractive, vital young woman, born for motherhood that is long denied her; her husband, Arthur, a printer who cannot bear the idea that most men die without leaving behind them any record of their having lived; his partner, Joe Roberts, a practical fellow who can do almost anything with tools; and Gwendolyn, Joe's beautiful fiancée, whose whole life revolves on the axis of her own self-love.

Miss Maddux's story is the tale of how these five persons receive the gifts and meet the challenges of the Green Kingdom, how they make for themselves a kind of life that might have been idyllic, had not tragedy followed them past the barrier of the secret door, in a land so strange that they even have to invent names for its flora and its fauna. It is a tale that is alive with adventure, romance, drama, and melodrama; a tale in which surprises for the reader wait along the way, in which the pull of "What will happen next?" is strong. It is a carefully thought out, carefully worked out story, by a novelist who can pause in the midst of action to scrutinize the great and lesser mysteries of life.

Ortega y Gasset has said that a novelist "must see to it that the reader is cut off from his real horizon and imprisoned in a small, hermetically sealed universe. He must make a 'villager' of him and interest him in the inhabitants of this realm." Miss

(*Continued on page* 33)



"Well, Clambertson, a fine botch you've made of the Department of Rivers and Highways!"

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—*Beaton*-Vogue.

Grace Wilson Vanderbilt—". . . determined to conquer."

The Hostess with the Mostest

"Queen of the Golden Age," by Cornelius Vanderbilt, Jr. *(McGraw-Hill. 311 pp. $4.75), is a portrait of that ruler of New York society, Grace Wilson Vanderbilt, by her son.*

By Allen Churchill

PRACTICALLY every grown New Yorker—and more millions who merely visited the city—has at one time or another looked at the Vanderbilt Mansion which stood at 640 Fifth Avenue and wondered what went on within that vast pile of seventy elegant rooms, more miles of telephone wire than in the Hotel Biltmore, and some thirty servants. Lucky indeed were the passersby who on winter nights saw the limousines driving up to Mrs. Vanderbilt's front door, disgorging women in ermine and sweeping gowns, and men in top hats. The mansion was, until torn down in 1945, the last reminder of the gilded social scene of the early 1900s, when the rich were obscenely rich and Mrs. Vanderbilt herself was so confident of her position as American royalty that she could correct her son, when he called attention to a lady hanging out wash, by saying, "That isn't a lady, dear, that's a *woman.*"

This same son, Cornelius, who grew up in 640 Fifth but left as soon as possible, has written a biography of his mother, Mrs. Grace Vanderbilt, wife of General Cornelius Vanderbilt. In her later years Mrs. Vanderbilt became *the* Mrs. Vanderbilt, foremost hostess in the United States and probably in the entire world. This eminence was exactly what she asked of life, and the havoc she wrought on husband and children seemed to leave her largely unmoved. Anyone who ever looked at the Vanderbilt mansion and wondered what went on inside can now find the answer: the place was, save to Grace Vanderbilt, something of a nightmare.

Mrs. Vanderbilt was born Grace Wilson, daughter of a Tennessee robber baron who, even more than wife and daughters, was determined to conquer New York society. Because they were well born and well bred the Wilsons did this with ease, and by the time young Neily Vanderbilt first saw Grace the family had joined the ranks of those rarefied Americans who spent more time abroad than at home. Neily promptly fell in love with Grace, but for some reason—not even the author knows why—the elder Vanderbilts objected to her, a fact which caused a male Wilson to write: "Confound their cheek and their audacity. I should like to give them a piece of my mind. Who the deuce do they think they are? One Wilson is worth a dozen of them any day in my opinion."

But after several family rows, in one of which the sensitive Neily reputedly struck his stern father, the young couple married. In retaliation the father cut him off with a single million. Then the old man died and in a gesture which would seem to be unique the family presented Neily with the six to ten million he ordinarily would have inherited.

A SEEMINGLY happy period followed, during which the young couple produced two children and Neily labored happily as an instigator of the New York City subway system. But Grace Vanderbilt, for all her seeming contentment, could not get over the fact that she was a Vanderbilt. Her husband hated social life, her children were sensitive and needed the guidance of an affectionate mother. Nevertheless, she set out to learn what her son calls "the exacting art of being a social leader."

Mr. Vanderbilt labors hard to make his mother a sympathetic figure, but it is a difficult task. It may be, as he says, that she could be a loyal friend and a stimulating companion. But she was obsessed by hostessing, just as another woman might be obsessed by drink, drugs, or gambling. She ruthlessly sacrificed everything to it, and though she wrote her children almost daily letters at school, she never had time to visit them. "Your mother has become a waltzing mouse," General Vanderbilt grumbled, and took to drink and yachting.

On one of the few occasions when the General and his wife were together on the yacht they found themselves tied next to Vincent Astor's *Nourmahal,* on the deck of which was that traitor to his class, President Franklin D. Roosevelt. The result is a lively scene, one of the few truly warm ones in the book.

Though he could not write a sympathetic book, Mr. Vanderbilt has contrived to write an odd one. It can almost be said that he has done it on three levels. He himself is one of the pioneers of American tabloid journalism, and he presents the story of his parents' courtship and marriage in pure tabloidese, one short, whammy paragraph charging into the next. In the second section he uses the memoir form, with copious use of family letters. In the third he adopts the Cleveland Amory approach, exposing the quirks, foibles, and extravagances of his hostess-mother and her set. This last is by far the best part of a book dealing with an improbable, departed age which, for all its social pomp and lavishness, was fundamentally exceedingly sad.

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Bon Vivant

***"The Elegant Oakey," by Croswell Bowen** (Oxford University Press. 292 pp. $5), is the story of a colorful New York mayor, actor, editor, and man about town of the 1870s.*

By Alvin Nizer

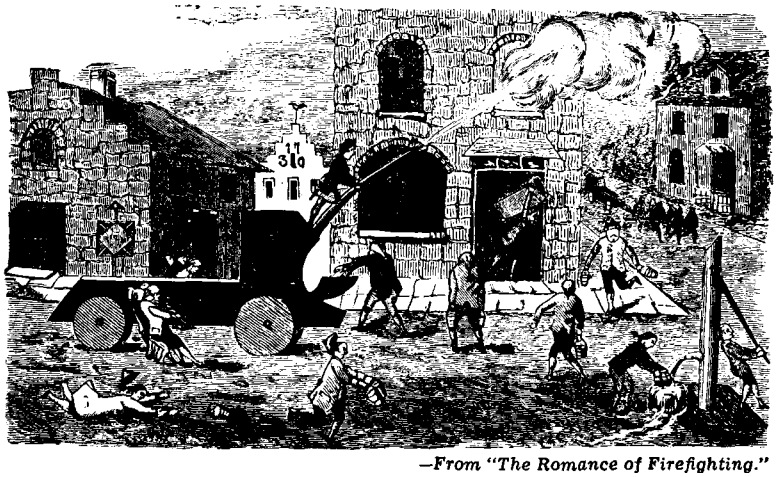
IT IS safe to say that nearly every writer delving into the history of New York who has come across the flamboyant figure of Mayor A. (for Abraham) Oakey Hall has thought to himself, "Someone ought to write a book about that fellow." Now Croswell Bowen has written the story of "The Elegant Oakey," the Jimmy Walker of his day (the 1870s), a dazzling dresser, wit (his forte was puns), poet (or poetaster), playwright, and even actor. Oakey was pudgy, heavily bewhiskered, and wore a ludicrous pince-nez, but he was a colorful personality nonetheless. New Yorkers, always partial to showmen as mayors, held him in high regard. But it was Oakey's misfortune (or maybe fortune) to be mayor during the worst plunderings of the Tweed Ring. A large section of the public, led by the cartoonist Tom Nast, believed Oakey was privy to the plundering. A larger section believed that the Elegant Oakey was a well-meaning man, unsuited to his high post and oblivious to what was going on. Three tumultuous public trials, all ending in Oakey's favor, failed to settle this provocative question.

But, though the populace was mainly for him, Oakey did not benefit from the trials. He did not run a second time for mayor. Instead, he went on the stage in a play of his own creating called "Crucible!" As leading actor in this four-act vehicle he performed the remarkable feat of seeming as good as any professional for two long acts. Then he tired, and his ignorance of theatrical skills caused his portrayal to fall to pieces, ending in an unhappy shambles. After that he went back to law (he had been district attorney before becoming mayor), and at the same time his marriage to a lady who was a model of propriety started slipping. The Elegant Oakey began suffering from periods of amnesia but rallied sufficiently to add another facet to his career by becoming editor of *The New York World*, and from all accounts a very good one. He then went to London, where he helped James Gordon Bennett, Jr. with the fiasco that was *The London Herald*. He married again, settled in London to practise law, became a Catholic convert, and started a cumbersome law suit against James Bryce, who, Hall charged, maligned him in "The American Commonwealth." Finally he returned to New York, a city for which he had always had a consuming love. He died there in 1898 at seventy-two, a ripe age which would seem to belie the hints of paresis in his middle years.

—From Harper's Weekly.

"H. G. Diogenes Has Found the Honest Man."

Mr. Bowen fails to get the measure of his Elegant Oakey until this biography is half done. During the gaudy years when Oakey was riding high as mayor and bon vivant he comes through in these pages as one dimensional, stiff, and uninteresting. But the declining Oakey seems to be more to Mr. Bowen's taste. Here he becomes a pathetic, gallant, memorable figure—and uniquely indigenous to New York.



—From "The Romance of Firefighting."

WHEN MANHATTAN CAUGHT FIRE in the 1730s the local firefighters went at it in the manner illustrated above. The men are using an engine with side pump-handles. But how even the feeble stream depicted could be produced by a pumper worked by so few men is incomprehensible to a twentieth-century mind. Down the street at the right, it will be noticed, comes another engine to render what is clearly needed assistance. This old print is one of more than three hundred illustrations in a new picture-and-text book **"The Romance of Firefighting,"** by Robert S. Holzman (Harper, $7.50). The story of the American fireman, his equipment, his problems, and his methods is told urbanely and spiritedly enough to satisfy the hardiest buff. Although he is a New Yorker, Mr. Holzman's view is broad enough to acknowledge that other cities do exist and he gives them their due. But another new book focuses its attention narrowly on the city. **"As I Pass, O Manhattan"** is an anthology of life in New York, edited by Esther Morgan McCullough and published by Coley Taylor, Inc. in (of all places!) North Bennington, Vt. at $10 a copy. Mrs. McCullough's book is all text—1,236 pages of it, bits of fiction, history, biography, and poetry—written by more than 200 authors from Washington Irving to Peter Viereck (including, of course, Walt Whitman, who coined the title phrase.) The quality is uneven but true Gothamites will endure the low spots for such a comprehensive and enthusiastic celebration of their home town.

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A Handful of Living Flowers

"Collected Poems," by Edna St. Vincent Millay, edited by Norma Millay *(Harper. 738 pp. $6), brings together most of the lyrics and sonnets of a minor poet who cut a bright swathe in the Twenties. Winfield Townley Scott, whose new narrative poem "The Dark Sister" will be published later this year, is our reviewer.*

By Winfield Townley Scott

WHEN we return after many years to poems which excited us in our youth we hope to find the excitement again, as fresh and tingling as when we were seventeen or twenty. Amidst the satisfactions—such as they are—of the presumably profounder judgment of middle age we should not surely list a self-congratulation upon having seemingly outgrown poems which once had us babbling in the streets by night; not surely, not always; for the losses of immaturity are not invariably fortunate. No loss of any kind of happiness can be altogether fortunate.

The greatest poets more than reward our hope. Because they spoke with the deepest concentration their lines shine for us all our lives; and we "find" things in them at, say, forty-seven which meant little or nothing to us at seventeen. As there is more to us, still more to them. It is among the minor poets—God must love them, he made so many of them—that our return is treacherous; certainly, that is, among those who as our elder contemporaries loomed so much larger size than time and death will let them stay. Like every artist, they must wither into truth, and where we remembered a garden we are liable to come upon desert or, at best, a few flowers such as may be found in Edna St. Vincent Millay's "Collected Poems."

The permanent question (which we are probably still too near this poet to answer correctly) is: Which poems? The temporary question (which now, unhappily, involves our youth) is: What happened to all the others?

This stout, handsomely printed volume omits her plays and translations, her lengthy "Conversation at Midnight," many—but alas not all—of her war poems; it collects her lyrics and sonnets, among them fifteen poems not hitherto brought to book and worth it only as a completion of the record. The lyrics, with a very few tangled-in sonnets, are the bulk of the book. One hundred and seventy-eight sonnets are piled up for the rest of it. This is unwise editing, for the sonnets would have benefited by being left as interludes among the lyrics and not amassed to a long section of repetitious form.

The book begins with the lyrics, and so we can return at once to the actual beginning:

> All I could see from where I stood
> Was three long mountains and
> a wood;
> I turned and looked another way,
> And saw three islands in a bay. . . .

The lines of "Renascence" are as familiar as though we had thought them up ourselves and so long ago we cannot recall when we didn't have them by heart. And so for most of that poem. Touches of archaism, of "literary" inversion, of childish overstress, may trouble us here and there; even more, a touch of insincerity—for surely this Maine girl talks of God by the book; but on the whole the poem maintains its simplicity, its directness and meaningfulness. If with hindsight we find "Renascence" contains the germs that marred or ruined most of the subsequent poems, they are incidental within this poem, which is a triumph still. The insincerities of young poets are not so much abominable as touching, for they are self-deceptions. We must only inquire if the poet can outgrow them or if the poet will be laid waste to weeds.

Edna St. Vincent Millay—"... a poignancy."

TWO characteristic lyrics which create a revelatory contrast are "Song of a Second April" and "Rosemary." Both lament in three stanzas a dead or departed lover. The first contains:

> There rings a hammering all day,
> And shingles lie about the
> doors;
> In orchards near and far away
> The gray wood-pecker taps
> and bores;
> And men are merry at their
> chores,
> And children earnest at their
> play. . . .

And the characteristics of the second are thus:

> Many things be dead and gone
> That were brave and gay;
> For the sake of these things
> I will learn to say,
> "An it please you, gentle sirs,"
> "Alack!" and "Well-a-day!"

The second is meaningless posturing. The first has the specific eloquence of exact detail—those shingles! —which Miss Millay mastered as well as anybody ever did, and it illustrates, no less, her mastery of the music of verse. The trouble is her mastery is intermittent; riddled, we may suspect, in her prime by utter confusion of poetic standards and toward the last by utter helplessness. The childlike voice of "Renascence" could not continue its nakedness because it wasn't quite genuine; where it might have developed into a whole poetry it flickers only here and there, and the poet has deliberately donned singing robes and has turned grand and false. For one poem as gravely beautiful as "The Return" (her best poem) we must plough through two dozen pitched to the high-school pageantry accents of "Love me no more, now let the god depart. . . ." For one as memorable and controlled as that beginning "I drank at every vine" there are pages

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of overburdened plants, birds, snakes, weathers, apostrophized in earnest, in collapse of poetic management, and in vain.

Still, in coming back to a body of poetry and finding it sadly shriveled we need not forget that the point about Edna St. Vincent Millay's work is the eternal point about all poems: most poems are mortal, it is only the other kind that count. Half a dozen of her lyrics and half a dozen of her sonnets seem to retain a poignancy as fresh as ever; in every instance—save "Oh, sleep forever in the Latmian cave," where sonorous grandeur is certainly achieved—these survivors belong to the simple, direct tongue in which she first was heard. I mean those I have already cited, and such a romping lyric as "We were very tired, we were very merry," and such a touching sonnet (her one good poem of her last decade) as "Those hours when happy hours were my estate."

Of course she was talented—but not *differently* talented from the countless contemporaries who tried to write the same sort of thing but who, unlike her, could not manipulate their derivations with such conspicuous aplomb; as also, like her, they could not advance them. Even her delightful vogue as a campus commotion was not unique. It had happened just before with Rupert Brooke, and just before that with Richard Hovey and Bliss Carman; it has happened since.

LET us put aside the famous legend of the bewitching girl who burned the candle at both ends. It had much to do with the glamor that coated these "Collected Poems" when we and they were young. It is no longer relevant; it had faded well before Miss Mallay's death. The real irrelevancy is deeper and is in her verse. It is a bookish verse, drawn from the Romantic tradition (Shakespeare to Keats) in general and variously influenced by Francis Thompson, Gerard Hopkins, A. E. Housman, Elinor Wylie, and Robinson Jeffers. It has amazing facility at times but small intelligence, captivating knacks, but only the similitudes of authority. It was loved at once for the worst of reasons: it had no difficulty. But a poetry lacking difficulty when new after awhile takes on the fatal difficulty of facing the question Why?

Toward the end she thought she looked into a familiar garden from which she was now barred:

I smell the flower, though
vacuum-still the air;
I feel its texture, though
the gate is fast.

It was she who made the gate. But within it and despite it there is a handful of living flowers.

THE POET'S QUEST: Neil Weiss's first book, **"Changes of Garments"** (Indiana University Press, $2.75), is in delightful contrast to the intellectualism of much American poetry. Paradoxically his media are the oblique and connotative. Employed out of a bizarre imagination, the effect is one of intense enjoyment by the poet and a kind of celebration of poetry. From "Euterpe's Visit": "A tear fell; then came a woman / in its place who struck a gong / with clenched fist and the rhythm / so bent the room it sang in myself."

The title of the book, taken from a

Marcel Marceau, French pantomimist, captivated New York audiences.

Thomas Dewey helped GOP harmony by enthusiastically okaying Ike-Nixon ticket.

PRACTICE MAKES PERFECT (or at least vast improvement) seems to be the moral of the short but extremely active career of a firm called Year Inc., whose sole *raison d'etre* is the production of text-and-picture histories. In the eight years it has been in business Year Inc. has published pictorial histories of the world, America, religion, and flight. The mainstay of the enterprise, however, has been the creation of a picture record of the year's news. The eighth annual volume, **"Year 1956 Edition"** just out ($10), carries the story from September 1955 to August 1956. The first volume, back in 1949, bore many of the earmarks of the work of enthusiastic amateurs, but by keeping diligently at it the editors this year have become thoroughly professional. In a thousand pictures and 75,000 words the story of the twelve months in twenty-six fields (from science to fashion) at home and abroad (from Algiers to Mexico) is skilfully reported. For good measure there are special sections on juvenile delinquency, the international geophysical year, the GOP's hundredth anniversary, and other topics. In the latest issue the pages are smaller but the book is thicker, making a volume that is easier to handle. The photos on this page are examples of the way "Year 1956" illustrates twelve months that are literally only yesterday.

Malenkov had a friendly reception in England where he toured power installations.

Kabaka of Uganda returned from exile in England to wild rejoicing of his people.

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Whitman line, suggests that Mr. Weiss is in search of himself as the poet, the lover, the child, and the man of the world. Being an adaptation of the Whitman theme, in each section are poems personally charged and evocative of Mr. Weiss's intent. The creative and the sexual are the materials of his search, with "Heaven," "The Crippled Child," "The Confidence," and "One Fine Night" among the more successful realizations.

If criticism must be made it is that in the exuberance of composition too many lines are allowed for the sound and texture of the word combinations, with a consequent thinning of meaning. From "O What a Catch Is Man": ". . . finger a dingle of light that falls / from draw down beam's hot well." However, this is not to minimize Mr. Weiss's buoyancy and charm. "Hurry up, winter / and with your finger / tap lace and filigree / over summer."

—David Ignatow.

NEW COLLEGE POETRY: Examining the poems in **"Riverside Poetry 2"** (Twayne, $2.75)—written by college and university students presently at one or another of eight academic institutions in the New York City area, submitted in a prize contest sponsored by the Riverside Church, and selected for publication by Mark Van Doren, Marianne Moore, and Richard Eberhart from more than 300 poems entered—I couldn't help thinking how much today's "college poetry" has been influenced by the New Critics' technique of close analysis. For one example, Herbert Marder's "The Poet" evokes, in Professor Hopper's phrase, "a maximum of associational supplements in meaning": for another, Donald Lehmkuhl's "Hart Crane" knowingly employs the symbol; while for Edward Locke's "Primavera"—again in Professor Harper's phrase—"we must assume the poet's familiarity with the neo-Platonic school of Ficino, which clearly has influenced Botticelli, as well as Poliziano's *Stanza per la Giostra.*"

Footnotes by the poets themselves are lacking, but the introduction generously supplies some, together with at least partial analyses of some of the most interesting poems. Professor Hopper's point of view, in line with his position as Professor of Christian Philosophy and Letters at Drew University, follows the premise that has led Riverside Church to sponsor this anthology—*viz.*, that "poetry is always 'religious,' either explicitly or implicitly." Broad enough in principle, in practice this approach leads to a rather one-sided effect: when poetry by various hands is all viewed *sub specie*

(*Continued on page* 32)

SOCIETY IN OUR TIMES

Quest for a Philosophy

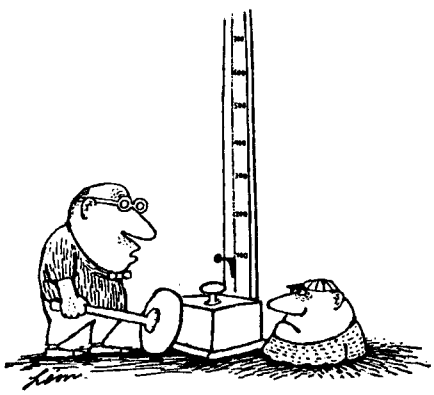
"The Unadjusted Man: A New Hero for Americans," by Peter Viereck *(Beacon. 339 pp. $5), continues the poet-historian's effort to expound a "New Conservatism"; this time he extolls the man who refuses to conform to currently popular ideals. Geoffrey Bruun, author of "The World in the Twentieth Century," reviews it.*

By Geoffrey Bruun

DURING the past decade Peter Viereck has published four volumes of verse and six of prose. Like his more fugitive eloquence—lectures, radio talks, conversation—his books reflect the tensions of a brilliant and independent mind seeking a philosophy of values.

The quest is an arduous one because Mr. Viereck is trying to reconcile disharmonic elements in his own nature and these make him peculiarly sensitive to the discords and contradictions of contemporary society. He is by turns a poet, philosopher, historian, critic, political analyst, and spokesman for the "New Conservatism." Occasionally a single note emerges, clear and true, above the medley, but more often he gives the impression of several voices speaking at once and not always in unison.

The titles of his books suggest his concern with contradictions, with reality and sham, conflict and conciliation. "Terror and Decorum," "Strike through the Mask!" "Dream and Responsibility" are memorable phrases. So too is "The Unadjusted Man: A New Hero for Americans" which conveys the certitude of one speaking with authority. The subtitle, "Reflections on the Distinction Between Conforming and Conserving," echoes an alternate Viereck who would like to wait until "the slow miracles of thought take shape through patience into grace." But more imperious impulses—lyric or didactic or polemical—intervene. Repeatedly, in speech or writing, he looses coruscating phrases, like bursts of tracer bullets, at targets only half-discerned or half-identified.



"Excuse me . . . may I try again?"

"First things first: the fight is for the private life," he asserts in his foreword to this volume, for "the Overadjusted Man knows only the public life." Several of these vehement essays decry the current over-emphasis on the socially "adjusted" personality. Several more proclaim the importance of the inner life, of "what the individual does with his loneliness" to combat "the worldwide trend away from the spontaneous and private."

OUR age has need of voices as eloquent as Viereck's to proclaim the dangers of uncritical conformity. It is an orphan age, severed from its historic past by the transforming impact of a dynamic technology. Today every individual in "the lonely crowd" is haunted by a sense of desolate and incommunicable singularity. Too many seek relief in mass movements, in the courage of numbers, too few dare the rigors of independent thought. Mr. Viereck is justified in sounding an alarm against this abdication of the sovereign right of personality. But his methods impede his aim. He tries to convince by condemning where he might inspire by persuading.

The same limitation weakens his defense of the "New Conservatism." In these pages he advances many sound arguments and fortifies them with sage observations from Burke, Coleridge, and Nietzche. But he makes the New Conservatism sound too much like an esoteric wisdom reserved for an intellectual elite, too much like a dogma and too little (though this is clearly his intention) like a faith by which to live.

Its least attractive feature is an unconcealed disdain for the masses. Viereck goes out of his way to affront when he says that "mass democracies . . . *are* sometimes on freedom's side—by accident." Or when, he over-

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Peter Viereck—". . . eloquent voice."

states his opening premises to vindicate the generalities that close it:

> Let the scandal out, let it be said aloud that by itself the voice of the people is never wise, never rational, never trustworthy. What, then, does deserve these three adjectives? The people, replies the new conservative, is "wise" only when acting within the framework of history, as incarnated in our living institutions and Constitution; only the moral laws of God are infallibly "trustworthy"; a society is only "rational" when it puts those historic roots and those moral laws higher than mere majorities.

A creed, certainly, and an emphatic one, yet one could wish that Mr. Viereck had phrased it with less vigor, made his implications more explicit.

For the essential point he apparently wishes to emphasize is a valid one. "The true opposite of despotism," as he observes elsewhere, "is not democracy (which often elects fascists) but restraint on power." Restraint on those who exercise power, certainly, and restraint no less on popular passions and prejudices. The new conservatives did not invent or discover this truth, but they perform a service in reaffirming one of the self-evident principles of democracy. But why make the statement unpalatable by mixing it with jibes at the people and the democratic process? And why resurrect the unpopular label *conservative* if one desires to equate it with the more neutral term *conservator*.

The Court and Our Rights

"The Liberties of an American," by Leo Pfeffer *(Beacon. 309 pp. $5), is a constitutional lawyer's study of the Supreme Court's record in respect to civil-rights cases. Our reviewer is Philip Lee Ralph of Lake Erie College.*

By Philip Lee Ralph

LEE PFEFFER, an eminent constitutional lawyer and veteran student of civil-liberties cases, in his new book "The Liberties of an American" makes an outstanding contribution to contemporary literature on a complex, controversial, and highly pertinent subject. As indicated by its subtitle—"The Supreme Court Speaks"—the book is an account of the ways in which the Supreme Court has defined, defended, and to some extent enlarged the civil and political rights of the American people. Although his purpose is "to portray the contemporary scene," he has written a brief history of civil liberties in the United States and has structured his exposition throughout by the citation of relevant cases. It is hard to conceive of any aspect of individual liberty which he has not touched upon directly or indirectly.

Although Dr. Pfeffer in his definitions adheres scrupulously to the pronouncements of the Supreme Court, he is fully aware that judges are not infallible and that their rulings do not necessarily embody supreme wisdom or perfect justice. Readers will be impressed with the number of crucial decisions handed down by a Court split five to four, and by the account of inconsistencies, contradictions, and hairsplitting in which the justices have indulged. The author describes tragic instances of the inability or failure of the Court to halt the legal persecution of unfortunates. For example, deportation under the Alien Registration Act of 1940—even when it ruptured family bonds and forced the victim to face probable execution in the country of exile—was held to be no violation of "due process" because deportation is not "punishment for a crime." Dr. Pfeffer regrets that the decision of the Court against the internment of Japanese Americans after Pearl Harbor failed to meet the Constitutional issue squarely so that the Government would not be tempted again to resort to the totalitarian device of concentration camps. He feels that the Court might well have moved at a faster pace on some issues, including desegregation. "If it had not announced the 'separate but equal' rule in the Plessy case in 1896, it would not have had to outlaw racial segregation in 1954, and racial integration would have come a half-century earlier and perhaps with less disturbance."

But for all its faults, the Supreme Court is given chief credit for saving the Bill of Rights from becoming a mere "parchment barrier" to tyranny, as James Madison had feared it might. "By and large it has kept its head when all others have lost theirs. If the Negro finally achieves equality, it will be by action of the Supreme Court, not of Congress, which has not enacted a civil rights measure for three quarters of a century." The greatest difficulty confronting the Court is that in dealing with civil liberties its function has had to be "not law but statesmanship." Its worst blunders have occurred when it alienated itself from the ultimate source of authority, the public conscience (as in the Dred Scott decision and again in the 1930s; and its best hours have been when it displayed courageous leadership "in molding the conscience of the community."

DR. PFEFFER'S outlook for the future is optimistic. The Warren Court (in contrast to the Vinson Court which upheld the constitutionality of the Smith Act in the Dennis case) has moved heartenningly toward the clarification and protection of civil liberties. The gravest danger now, and a very real one as Pfeffer sees it, lies in the action of irresponsible individuals, against which the Bill of Rights is largely powerless. Freedom of speech and freedom of teaching have become inhibited by "private censorship, suppression, and boycott." Neither the Court nor any other agency is sufficient to maintain freedom. Its preservation "is the common responsibility of the Federal Government, the States, and the American people." Dr. Pfeffer fervently hopes that we will never be content with a "part-time democracy," and he reminds us that "democracy is more likely to survive and grow if it willingly accepts

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Fable for 1957

AND then one day in 1957 the men of the United Nations felt they had wearied of listening to one another. And so they made it to be known that on a certain day they would open their doors and ask the people to come in to speak, that they might say what was in their hearts. When the day came the people waited in long lines, each for his turn to speak, for it was true that there was much that was of concern to them. And three of those who spoke seemed to speak for all. One of them was a teacher.

"It is my privilege in life to help in the education of the young," he said. "I am asked to prepare the young for a place in society, to instruct them in skills, to enable them to place a high value on the lessons learned from human experience. But the biggest problem in education lies outside the school. It is that the world itself scorns the meaning of education.

"You dispute this? I ask you a question, then: What is the one purpose of education that ties all other purposes in education together? And I would answer that it is to profit from experience.

"For this is what progress is made of. Man learns his lessons and grows. He builds his sciences on the tests he makes and the experiences that flow out of them. We teach the story of history that young people may learn. And yet the big lessons in the world that determine whether people will live or die, and the meaning that their lives will take, have yet to be learned by governments. Education for the young thus becomes a farce because society itself refuses to be educated, refuses to respect known experience as a guide.

"Consider the history of nations. Never once in the history of man has peace been maintained by coalitions or power blocs or special alignments solemnly put together. Yet there invariably comes a time when it is to the interest of a nation to break the treaty or the alignment. Very recently many of the nations of the Western world came together and with great ceremony signed pacts establishing a North Atlantic Treaty Organization, which called for militant action to resist aggression. But as has happened again and again in the past, when a situation arose that made unilateral action desirable, that action was taken and the basis of the treaty organization was grossly violated.

"We talk about the consequences if the peace should fail. We said the peace could be assured if only aggression could be halted. And we looked in only one place for the potential aggressor, forgetting that war can also be the product of an uncontrolled situation. How much has the world actually studied the causes of war? Why is there an illiteracy of society itself on matters that transcend all else? How can we expect education to make any sense to our youngsters, when we send them into a world in which anarchy is upheld over sanity, lawlessness preferred to peace?

"Consider the paradox. Here we have a United Nations. At a moment's notice, dozens of men in this chamber would spring to their feet if the sovereignty of their nations were infringed. But what about the sovereignty of the human community? Who will spring to his feet to defend people —people, regardless of their national flag?

"Slowly, at incredible cost, the realization has come that a U. N. Police Force is necessary. Several questions: How is it that the lessons of Korea with respect to a police force were not learned? How is it that such force is brought into being only after the damage is done? And now we have the ludicrous spectacle of the U. N. Police Force being instructed by the belligerents concerning where they should or should not go. And how can a police force truly function unless it has clearly defined laws to enforce? People want justice. The purpose of law is to create a foundation for justice. If the U. N. is concerned only with improvising a force to repel aggression after it occurs, and not with justice, there can be no real basis for peace.

"At least this is what history tells us. And we have a right to expect that nations will learn from history, for what is a nation but an assemblage of human beings—the same human beings who work so hard to make their lives productive and who insist that their children be given a proper education?"

THE second person who spoke identified himself as a clergyman.

"My plea is brief," he said. "I ask whether you understand the position in which you put me and all men like me who minister to the spiritual needs of people. You have told us, in effect, to detach ourselves from our concerns with the sacredness of man. You have arrogated to yourselves—and when I speak about 'you' I speak of the nations in their full sovereign armor—the power of decision concerning what the nature of man is to be. You now possess the means for creating new forms of life to replace man. You can do this by twisting man's genes and making him into a monster. You *say* that this will not happen, but you do not *know* that it will not happen.

"What is Sin? What is Evil? Are they merely random acts committed by an individual against others and against himself? Or are they things that can make man into something he was never intended to be?

"If, therefore, I am not expected to exempt myself from my concern for the sacredness of man, I must come before you to ask that you see beyond the cause of the nation to the cause

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LETTERS TO THE EDITOR

NEOPLASTIC PEOPLE

EDGAR ANSEL MOWRER'S "Sawdust, Seaweed, and Synthetics" (*SR* Dec. 8) touches on a problem that needs a lot more thought. The analogies between man in society and cells in cell communities are legitimate. The problem of self-limitation of growth was solved a long time ago by cells; it had to be before the higher organisms could develop.

I wish to urge a Society for the Study of World Population, to collect funds and sponsor scientific research on the problem of how to limit world populations and on the question of what constitutes an optimum population—before it is too late. It should also sponsor philosophic discussion of the issues involved. The American people have responded generously to the drives put on by the great philanthropic organizations for cancer, polio, heart disease, muscular dystrophy, cerebral palsy, tuberculosis, and other diseases that represent evils whose elimination is a universal goal. Our people must be made to realize that unlimited use of man's reproductive powers is as much to be feared as any other neoplastic disease. All uncontrolled growths inevitably kill the host on which they live.

VAN R. POTTER.

Madison, Wis.

NEUROTIC SOLITUDE

IT'S CURRENT psychiatry which helps make for overpopulation. These days its express goal is genital primacy, monogamous affection, heterosexuality, marriage, and procreation. Not just for those who want to, but for *everybody*. If you don't want to you're inviting psychiatric attention. Solitude? Privacy? Independence? To most psychiatrists these are neurotic desires.

JAFFERY SUTTON.

New York, N.Y.

SR'S CLARION CALL

I'M AFRAID THAT the future, which has the right to judge us as to how we meet our specific challenges, will find us a lazy, stupid, and ungrateful generation. At least *SR* is doing *its* best to wake us up, with articles like Mowrer's.

EUNICE FITZGIBBON.

Matteson, Ill.

WHERE WE DON'T WANDER

CONGRATULATIONS TO Mowrer and to *SR*. I wish the article had ended with this quote from Henry Thoreau: "We need to witness our own limits transgressed and some life pasturing freely where we never wander."

G. R. DEERING.

Manhattan Beach, Calif.

LEVITTOWNER SPEAKS

AS BOTH A TEACHER and a resident of one of what Mowrer calls the "monotonous Levittowns" I hasten to deny that all the members of my profession are little more than coaches for conformity. Don't you think we like privacy once in a while, too? Certainly we're not beating the drums for the overcrowded classrooms in which we're supposed to function. I do agree that Levittowns aren't the most beautiful places on the globe, but they are more beautiful than the cities from which most of us came. There's grass here—nice and green, too.

WILLIAM C. HUGHES.

Levittown, Pa.

THROUGH HISTORY WITH J. WESLEY SMITH

"Stop making promises—you're already elected."

GRIM PROSPECT

THE PROSPECT OF earth "covered with a writhing mass of human beings"—and the grimmer reality of modern Calcutta or Canton—ought to shock us into doing something to preserve the treasures of natural beauty, freedom, quiet, adventure, and self-expression. Otherwise "Nineteen Eighty-four" will be upon us before we know it.

WILLIAM E. LUKENS.

Plymouth Meeting, Pa.

MORE AVERAGE CHILDREN

THE "AVERAGE YOUNG WOMAN" *is* limiting her childbearing—that's the trouble. The young woman whose intelligence soars above 140—the woman whose children are needed in the future world—is probably married to a college professor making $4,000 a year, and has only one child. Or she's a career woman with no—or just one—child. The silly little fluff who could barely finish high school already has four children, and the semi-moronic woman in the slums of Asia has borne eighteen, of whom twelve or so somehow survive.

SR should not encourage the young woman of high intelligence to shirk her biological responsibility—on the grounds of overpopulating the earth or any other grounds. The average intelligent college woman had better have ten or eleven children, even if she has to deny herself an automatic dishwasher, if we want a decent world to live in.

MARION ZIMMER BRADLEY.

Rochester, Tex.

THE BALL TO SIMPLE SIMON

DEAN GILDERSLEEVE'S astringent comment on "The Abuse of Democracy" (*SR* Nov. 24) brings to mind Bryan's dictum, "The cure for the ills of democracy is more democracy." Let us make our colleges completely democratic. If it gives a dimwit a sense of inferiority not to be promoted along with the bright, it also gives the feeble a sense of inferiority not to be acclaimed along with the strong. Why should that hulking brute Taddeo Przybylski be allowed to monopolize the position of halfback on the varsity team merely because he can plunge fifteen yards through the Oklahoma line whenever he is given the ball? To let Przybylski have all the glory gives a sense of inferiority to Caspar Milquetoast, Jr. True, young Milquetoast weighs only 110 pounds and is blind in one eye, but what of that? Our team must be run on democratic principles at any cost; only so can we achieve what seems to be the goal of American education: to prevent Simple Simon from ever suspecting that Socrates is the better man.

GERALD W. JOHNSON.

Baltimore, Md.

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BROADWAY POSTSCRIPT

Trying to Like Eric Bentley

IT WOULD BE NICE to like Eric Bentley. He writes well about the theatre even when one disagrees with his pronouncements, which is a good deal of the time. Also, he battles for playwrights of substance: Pirandello, Anouilh, Giraudoux, Brecht, etc. He has an insatiable appetite for new dramatic forms. And, above all, he is willing to expose his sensibilities to the traumatic experience of working in a theatre.

In the latter activity he is currently the adaptor and director of Berchtolt Brecht's **"The Good Woman of Setzuan."** As he is a fanatic devotee of the late German playwright's complex theories, he would seem the ideal person to set a group of American actors on the road to the kind of result achieved by the Berliner Ensemble, and to preserve the integrity of the original.

However, the results are not good Brecht, good Bentley, or good theatre. While the constructivist set copied from Ted Otto's original has a certain stark fascination, almost everything that happens in it is unclear, uncomfortable, and unconvincing. We are periodically treated to glimpses of the orchestra minding their own business on a platform at the rear of the stage. Actors turn and address the audience as if they would like to make some impact, but cannot because it is forbidden. Three gods enter as if they were amateurs playing charades. And even Uta Hagen, who teaches actors the importance of always relating themselves to other actors onstage, seems related only to some mysterious inner thoughts as she portrays Shen Te, the good woman who suddenly finds it impossible to continue being good after the gods have given her enough money to lift her from the proletariat to the bourgeoisie. Miss Hagen also eschews the relish which make a delightful irony of Shen Te's device of finding a disguise in which she can act tough. In a scene where Shen Te is torn between the humane act of helping a wretched water-seller and impressing a rich man whose sponsorship is essential to her business, her emotions seem only slightly involved. And if there was ever a bitter comment to be bitten off by an actress, it is the one Shen Te makes upon finding herself still in love with a man she knows is betraying her, "Why are there vultures in the air? A young girl is going to meet her lover." Miss Hagen throws it away.

It might be argued that Mr. Bentley's translation deserves throwing away. Certainly there is much in it that is awkward. Words like "indignity," "toleration," and "chrysanthemum," pop up in the midst of simple conversations. And lines that might have been funny in the original lose their humor when they come out, "The good can't defend themselves and even the gods are defenseless." Mr. Bentley needs to listen with his ear and his heart rather than just with his mind. He needs to become objective enough about his own adapting to appreciate that Marc Blitzstein's job on "The Threepenny Opera" (still the best musical in town, "My Fair Lady" included) is better *theatre* than his own. Until he acquires enough humility and sensitivity to hear this evident truth, he will continue to penalize the fine works he brings to our attention.

BUT even with a good translation, Mr. Bentley might still find himself in trouble as a director. After all, directing is the art of getting results onstage, not of faithfully following a fine theory. Like Stanislavski, Brecht wrote a great deal about dramatic theory that was completely negated in the actual performance of his own company. When the Berliner Ensemble opened in London last summer everyone was surprised to find how much good conventional theatricality it contained. Tricks were plentiful, some characters resorted to wide exaggeration and farce, and basic human emotions were exploited to the hilt. For Brecht was a pragmatist.

But what Mr. Bentley seems to have done is merely to have removed the passion and inhibited the actor from exploiting his normal means of expression in a "good intention" to be faithful to what Brecht wrote *about* his work. Albert Salmi, who is one of our best young actors, seems to work against his natural humor. Only Zero Mostel and Nancy Marchand rise briefly to competence when they use a bit of theatrical technique. The one effective scene in the play is the final one, in which three characters smoke cigars in unison in a vaudeville manner. This scene also contains the play's best line, "Good intentions bring people to the edge of the abyss, and good deeds push them over." This comment has an unintended application in this present production.

—HENRY HEWES.

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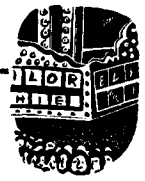

SR GOES TO THE MOVIES

● The Schweitzer Story

A FILM about Dr. Albert Schweitzer has been long overdue, and since the man himself was the main obstacle to making one, the producers of a full-length documentary called **"Albert Schweitzer"** are to be congratulated not only for the qualities of the work, but for the devotion they gave to their project. They have been unusually thorough, including in the movie scenes of the Alsatian town Gunsbach, in which he was reared; vivid pictures of the jungle hospital at Lambaréné in French Equatorial Africa; a commentary on the intellectual, musical, philosophical, and theological work of Dr. Schweitzer; and enough memorabilia to round out a portrait of one of the great men of our century. The movie took over five years to make, and it is pretty much the work of two people, Jerome Hill and Erica Anderson. Their film is notable for the skill with which they have done the job, and for their self-effacement. It is about Schweitzer, his work, and what he believes.

Others have wanted to make a movie about him, but he persistently refused. There was nothing dramatic in his story, he felt; he was busy; filming at Lambaréné would interrupt and impede the day-to-day work of the hospital; a movie made under the conditions obtaining at Lambaréné could only be of poor quality. More than anything else, there was his own self-effacement. Erica Anderson's request to film him at work at the hospital was at first refused on the above grounds, but she was invited to come as a friendly visitor if she so desired. During her first three-week visit she laid the most important groundwork for the movie by convincing the camera-shy Dr. Schweitzer that a movie was possible, that it would be a good thing to do, that it could be done well, and that it would not be too disturbing an intrusion. Miss Anderson made four other visits to Africa, some as long as of five months' duration, and now that Schweitzer's consent had been obtained Jerome Hill was able to go to work on the European portions of the movie.

I bring up all this to show that Miss Anderson and Mr. Hill were not motivated by commercial considerations—the proceeds from the film go, by the way, to the hospital at Lambaréné—but because they had a great deal of belief in the importance of Dr. Schweitzer and in the importance of such a film as this. I should mention, too, the technical difficulties Miss Anderson encountered. Gabon is so hot that no one bothers to keep a record of the temperature; it is better to be without knowledge of it. Gabon is humid, too; one is always wet. Fungus gets into the works of the cameras, into the lenses. Heavy machinery breaks down, electrical contraptions don't function for long. Even the operating room at the hospital is operated by a two-horsepower primitive generator, and this breaks down frequently. Operations continue with the aid of large flashlights. Miss Anderson eventually brought in two small army generators to solve her lighting problems. The army can be congratulated; their gadgets worked fine.

Meanwhile, Schweitzer grew more cooperative. His camera-shyness does not show on the screen, as we see him paying a visit to Gunsbach, playing the organ he reconstructed in the village church, greeting friends and neighbors. He is himself, a remarkably sturdy chap of eighty-one, busy all the time at a book or at administering the hospital. His faculties are keen. Should he walk along a path in the jungle near Lambaréné his eyes will spot the smallest nail. He picks it up. Everything is useful at Lambaréné, where materials are three times as expensive as elsewhere because of the difficulties of transport. When a narrative was needed for the movie he decided he might as well write it himself, since he was the one who knew the whole story. So here is another aspect of the man: Albert Schweitzer, screenwriter.

IT IS a good narrative, with the voice of Fredric March heard in the English version and Schweitzer's own in the German and French versions. Burgess Meredith adds a commentary. We hear some of Schweitzer's ideas and principles. "Whoever is spared personal pain must feel himself called to help in diminishing the pain of others." We hear the phrase with which he has become identified: "Reverence for life." We sense something of his modesty—when asked why he traveled third class in the train to Gunsbach he replied, "Because there is no fourth class." It's a fashionable parlor game to psychia-

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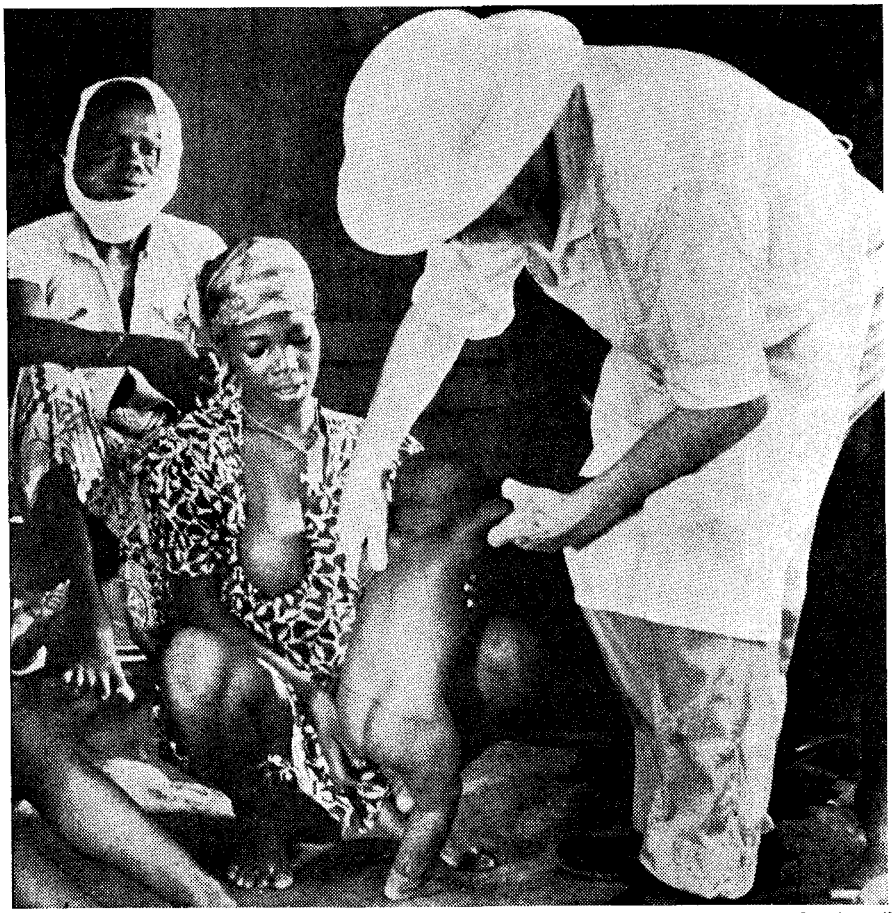

—*From "Albert Schweitzer."*

Dr. Albert Schweitzer and patients at the Lambaréné hospital—". . . reverence for life."

trize those who devote themselves to others, who concern themselves with human pain and its alleviation, but Schweitzer is someone quite impervious. He does what he does because he must; his actions are an outgrowth of what he believes.

It is out of ideas like these (badly summarized) that the Lambaréné hospital on the Ogowe River was created. Now some 5,000 natives a year come there for treatment. Dr. Schweitzer and his staff administer to their needs: dysentery, skin ulcers, sleeping sickness, strangulated hernia, elephantiasis, and leprosy. There is a leprosarium on the hospital grounds where whole families live. A patient needing an extended stay at the hospital need not stay alone. His family may stay with him. The able ones work in return for their food. There is a natural indolence due to the climate, but they work. Schweitzer works with them.

The money that Dr. Schweitzer earns through the sale of his books and his organ recordings helps support the hospital. The doctor, it is clear, has his roots in the nineteenth century. He is a craggy individualist, an anomaly in an organizational world. His eighty-second birthday comes this month, but this movie wouldn't be on hand to help him celebrate it if it were not for the changes in the technology in the motion picture. He didn't want it shown until after his death, but when it was pointed out that screen dimensions were changing fast, that fewer and fewer theatres might be able to show a movie made in ordinary dimensions, he gave his consent.

Perhaps this fine documentary will suggest what should be done with more of the world's great living figures. It demonstrates that there is no more graphic way of showing to audiences everywhere how and why a man works, and what it is he has accomplished. Those who worry and cry (and sometimes scream out) about the lack of moral values in films, about the necessity of the medium to inculcate sound values in the young, might have the answer they are looking for if they will go and see "Albert Schweitzer." Here is the kind of movie that does it without preaching, without censorship, without ulterior motive. It only requires money to make them (and not nearly so much as the average Hollywood production) and there are people with the necessary skills and imaginations ready to go to work.

—HOLLIS ALPERT.

● Looking Backward

THE year just past was notable for wide movies, good movies, and extremely long movies. Sometimes they were all three. It was a year, too, in which some of the biggest czars in Hollywood (known as executive producers) either abdicated their celluloid thrones or were pushed off. Darryl Zanuck of Twentieth Century-Fox, Don Hartman of Paramount, and Dore Schary of M-G-M all left their respective perches. It is not coincidental that they no longer hold their jobs. Custom tailoring is more and more becoming the style in Hollywood. Directors, writers, independent producers, and stars are seizing the reins, indicating a sort of divorcement between "talent" on the one hand and "business" on the other.

There are now director-producers like John Huston, Elia Kazan, and George Stevens. There are star producers like Gene Kelly, Burt Lancaster, and—wonder of wonders—Marilyn Monroe. And there are producers content to be simply producers, knowing that the function entails a good deal of creative responsibility, as well as a hunch as to what makes both good movies and box-office: among the most successful are such as Hal Wallis, Harold Hecht, and Mike Todd. What is happening can be gathered by implication from the American contributions to the list that follows, a compilation of the ten best of the year made by *SR*'s movie critics, Arthur Knight and the undersigned. The selections are not necessarily made in order of merit, but more or less as they emerged in furrowed recollection over a friendly martini.

AROUND THE WORLD IN 80 DAYS: A mammoth movie, in Todd AO, with an untold number of stars, the world as its oyster, Mike Todd as its impresario, and S. J. Perelman crackling the lines.

LA STRADA: From Italy. Federico Fellini's masterpiece, filled with mood, mystery, hunger, and cruelty. A dream of a movie, fulfilling the potentialities of neo-realism when all had thought the well was dry.

BABY DOLL: The most controversial movie of the year—and of the moment—and one of the most fascinating. It is made up of the haunting South of Tennessee Williams, and has on it the peculiarly powerful touch of Elia Kazan. The answer as to whether it is moral or immoral, true or false, meaningful or empty, is to be dis

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covered only in the eye and mind of the beholder. This, in itself, is a good thing.

GIANT: Another of those monstrously long but pretty nearly always interesting movies. It includes a striking plea for racial tolerance, and some magnificent effects by that fine director, George Stevens.

LUST FOR LIFE: An honest, sympathetic account of the life of Van Gogh, based rather on the letters to Theo than on the book of the title. The performances are all good, and Vincente Minelli, the director, has seen to it that backgrounds are related to paintings —of which scores are reproduced.

PICNIC: Lushly adapted from the William Inge play, replete with lively regional doings and notions of what life is like in the American Midwest.

THE MAGNIFICENT SEVEN: Seven samurai in medieval Japan, made by Kurusawa, a director who not only knows his business, but has studied the American Western.

MOBY DICK: John Huston on the trail of Melville's white whale. He does better with the whale than with Melville's meanings, but nevertheless manages to contribute a lot of excitement to the screen.

THE KILLING: A low-budget film that is one of the best of the crime genre. It has a swift pace, an ingenious story, and some tightly effective direction. Not unlike the French "Rififi," which also has its excitements but is marred by pretentiousness and men with guns that go splat, splat! A young team, Stanley Kubrick and James Harris, made "The Killing" and the sleeper of the year.

RICHARD III: If not quite on the level of such other Olivier-Shakespeare triumphs as "Henry V" and "Hamlet," it nonetheless contains gems of acting, a chilling performance by Olivier, and a good deal of ingenuity in the adapting.

THESE were the high points of the year. Pressing hard, however, for places on the list were such as "Attack," "Vitelloni," "The Friendly Persuasion," "The King and I," "Come Next Spring," "The Swan," "Trapeze," and "Marcellino." None of the TV adaptations amounted to much this year, although the big screen showed every willingness to borrow from the small screen. "War and Peace" and "The Ten Commandments" made news, but did not win high praise from *SR*'s critics. The British and the French were not quite up to their usual best, the Italian story was all Fellini. —HOLLIS ALPERT.

"ELIA KAZAN'S MOST SKILLFUL FILM TO DATE! AN INCREDIBLE COMBINATION OF FAULTLESS DIRECTION, CAMERAWORK AND PERFORMANCE!" *Arthur Knight, SR*

"THE CAST PERFORMS WITH WITHERING CANDOR! ELIA KAZAN'S DIRECTION IS SUPERB!" *Bosley Crowther, N.Y. Times*

"KAZAN HAS A WAY OF BUILDING TO PEAKS OF EMOTIONAL VIOLENCE THAT ALMOST KNOCK THE MOVIE-GOER'S BREATH AWAY!" *William K. Zinsser, N.Y. Herald-Tribune*

ELIA KAZAN'S
PRODUCTION OF
TENNESSEE
WILLIAMS'
"BABY DOLL"
STARRING
KARL MALDEN
CARROLL BAKER
ELI WALLACH
STORY AND SCREEN PLAY BY
TENNESSEE WILLIAMS
DIRECTED BY ELIA KAZAN
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TV AND RADIO

The Popcorn Millennium

THIS column is not in the habit of passing along stock-market tips, but if any readers are interested in a blue-chip spectacular I suggest they buy popcorn. Popcorn is due for a worldwide rise.

Everyone who watches television knows that Hollywood is taking over Madison Avenue. The late late shows and the million-dollar movies have been celluloids-in-the-wind for years now indicating the shape of things to come. This year, however, with the release to TV stations of first-run Hollywood features produced before 1948, the movie studios have begun to lower the boom in earnest on their electronic competitor. In Chicago WGN-TV, a local station, began grinding Twentieth Century-Fox first-runs recently—with thunderous results. The first film, "How Green Was My Valley," achieved a 73 per cent share of the audience. The old movie outdrew "Climax," "Dragnet," "Groucho Marx," "Playhouse 90"—everything. In Boston first-time-on-TV Warner Brothers features and Popeyes beat "Mickey Mouse Club" 14.5 to 12.6. Businessmen have taken note. *Advertising Age,* the authoritative "national newspaper of marketing," reported recently that the popcorn industry has been successful in its desperate drive to switch popcorn munching from movie theatres to home TV sets.

"Until about five years ago," the report states, "popcorn processors depended on theatres for about 65 per cent of their sales. The fall-off in movie patronage (due to TV) posed a serious threat to a major segment of the business. An answer to this threat came in 1953 when the Popcorn Institute was established for the sole purpose of increasing the consumption of popcorn. An estimated $4 billion was spent on popcorn promotion; and now, in spite of the drop in movie theatre sales, overall popcorn consumption is at an all-time high of 200 million pounds a year. The popcorn industry has weathered its crisis by following more patrons home and becoming part of TV watching." Any shrewd market operator can put these two pieces of information together and make himself a cool million. With more people watching movies on television more people will consume more popcorn.

The Television Bureau of Advertising predicts that in 1957 all TV will gross 22 per cent more than last year's record figure of slightly over $1 billion. According to Nielsen, the overall daily average of television viewing reached six hours per American home in January 1956. But we are still in the foothills. World distribution of TV sets will have risen 18 per cent as 1956 ends to an estimated total of 50 million. The United States leads with some 40 million sets. Britain, Bavaria, Australia, Iraq, France, Russia, Finland, San Salvador, Spain, Japan, the Philippines, to name only a few nations, also have TV. Even Egypt, prior to its recent difficulties, ordered a $336,000 television broadcasting system from RCA. It is reported that a great number of U.S.-produced films ($2 million worth) have been imported into England.

True, the success of the imports has depressed some of England's intellectuals. Wolf Mankowitz, noted British author ("A Kid for Two Farthings" and "The Bespoke Overcoat"), recently panned the American invasion of films on British TV as "canned pap." The author, doing a guest turn as TV critic for *The London Evening Standard,* testily asked what was so *British* about the British Broadcasting Corporation in view of its presentation of "Burns and Allen," "I Married Joan," "Roy Rogers," "Amos 'n' Andy," "Disneyland," "Liberace," etc. But Mr. Mankowitz is obviously an English egghead with no talent for getting rich quick in the stock market. He cannot foresee that after "I Love Lucy" must inevitably come Paramount, Columbia, RKO Pictures, etc., with their bulging backlogs of pre-1948 picture releases. The engulfing flood of American-made movies will eventually inundate all the TV stations now on the air or destined to be born in Europe, Asia, Africa, everywhere. And presently, in the fulness of history, the nations of earth will truly be united by the universal hush that falls at the the roar of Leo, the M-G-M lion—and popcorn will be there. —ROBERT LEWIS SHAYON.

The White Crayfish

By Robert A. Wallace

THE white crayfish lives in a cave
in utter darkness save

for the feeble yellow beam
turned into the stream—

which shows back surprise
in a thousand eyes

but runs on darkling clear
as twinkling glass. Here,

beneath the root-bearded sky,
miles or inches high,

where the darkened stream unseeing
mulls
the shiny pebbles

in its mind, the silent crayfish
in darkling wish

sits ivoried and wholly still
in the current's will,

one tiny heavy pincer lost,
a kind of armored ghost,

whose feelers slightly bend
in the liquid wind

the water is moving in his world.
His eyes are pearled,

cloudy and hard—useless
when strangely thus

exposed to light—though may it be
they sometimes see

the dark itself, the figures of it,
and show back, darkly, wit?

They show no special interest in
a kindly-meaning sun,

preferring dark to all the light
they've ever seen, or might.

A delicate star assembles high
in the hairy sky,

a shining water beadlet, drops,
tattering the water-top

like web-cracked window glass
and swiftly passes

seaward into dark, leaving the stream
as it had been

save for the mirrored vanishing
and backward spring

of the crayfish, who elsewhere
now in the clear

and watery dark sits motionless,
knowing what we only guess,

that dark has stars that slowly fall
but is as good, withal,

as light. Both running stream and
crayfish in their ways,

though dark as perfect night, conceal
what light reveals,

and lightless make a light reply.
In dark, stars die,

and dark is all the same as light,
if you see it right.

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MUSIC TO MY EARS

There's Gold in Peru — and in "Perichole"

IF THE Metropolitan Opera had a marquee it should be spelling out the name of Cyril Ritchard in lights, big and bold, for making Rudolf Bing's new production of "La Perichole" one of the happiest examples of musical theatre New York has had in our time. And if, as viceroy of an entirely imaginary Peru, Ritchard takes rank above any marquis, that is justice too, for what country would not be glad to have Jacques Offenbach write its tunes, Rolf Gerard to design its decor (including some of the most blissfully colorful costumes these eyes have ever seen), with Theodor Uppman and Patrice Munsel to play its young lovers? If you can't get in to "My Fair Lady" don't miss "Perichole."

Out of a rather threadbare tale of a viceroy who covets a street singer but can't "have" her until she marries (naturally the "anonymous" groom is her singing partner, whom she couldn't afford to marry otherwise), Maurice Valency has elaborated a literate, sometimes genuinely witty English script and singing text. Ritchard has applied to it a composite of the musical understanding he showed in his "Barber of Seville" in 1954 and the broader music-hall approach justified by the light texture of the music. Something of Gilbert and Sullivan (and not a little of Moss Hart) have gone into a jaunty but tasteful, inventive, but free-flowing treatment which makes the Metropolitan the world's largest funhouse while he is on stage. His viceroy, with several changes of gaudy costumes and the most amusing horse scene since Paul Whiteman appeared in "Jumbo," is a sheer comic delight, especially when he appears as keeper of his own jail in Act III, a bearded blend of Monty Woolley and Richard Haydn.

When Ritchard is not in view Uppman is giving a capering, lighthearted performance as Paquillo which vies in excellence with the lively Papageno he did in last year's "Magic Flute." Between them Uppman and Munsel project more of an English text than has been heard from the Metropolitan stage in years, his light baritone, particularly, floating it to the ear. A perfect choice for the part, Uppman was charmingly companioned by Miss Munsel's Perichole, a composite of her Adele in "Fledermaus" and Despina in "Cosi," with a new flair for comic timing and saucy action which has, naturally, grown from her past experiences. If there is a technical complaint to be entered, it is that Perichole is really a mezzo part, especially in its more affecting moments, of the letter in Act I and the "Je t'adore" of Act III (in this version), in which Perichole wins back Paquillo after, apparently, deserting him. However, Miss Munsel contributes so much charm and sparkle to the enterprise otherwise that these transgressions may be forgiven. In addition, her youth and ever-increasing sense of the stage give her rank as a comedienne whose future may be longer than her past as a coloratura. Among the major credits should be one for Alessio di Paolis as a ghoulish Prisoner with a Charles Addams personality.

In musical content "Perichole" ranks high among the best of Offenbach for the superior appropriateness of each element to the place assigned for it. To be sure, there are interpolations from other scores (a circus sequence to fill out Act I, a ballet to bolster Act II), but each duet and finaletto and finale has a suitability to its comic function that proclaims the master hand. *Per se* the tunes may not be as fine as some in "Orpheus in the Underworld" or "Belle Helene," but it is not lacking in memorable bits (one of the best, the letter, was wisely appropriated by Manuel Rosenthal for the ballet "Gaité Parisienne").

Disciplining the whole was Jean Morel (a graduate of the Opera Comique, where Offenbach is gospel), making an overdue debut as a Metropolitan conductor and finding a tidy adjustment of orchestra to voices that made the values in the score wholly audible. Crisp as the most carefully contrived *pomme soufflé*, it still had the air space to keep it light and buoyant as well. Excellent chorus work (rarely has the Metropolitan ensemble, both choral and balletic, looked so presentable) prepared by Kurt Adler were blended into a whole that left no doubt that Morel is a man the Metropolitan can use and reuse to correct its faulty French accent.

Associated with the majors mentioned were some excellent minors, especially Paul Franke, Lorenzo Alvary, and Ralph Herbert as attaches charged with carrying out the viceroy's "nefarious" scheme, Rosalind Elias, Heidi Krall, and Madeleine Chambers as the Three Cousins whose bar keeps the Peruvians in a constant state of liquid exhilaration. That all of them could be welded so suitably into a theatrical entity, playing the most difficult of styles (anachronistic comedy) in complete unity and proportion—there wasn't one opera-sized aside in the whole production—is testimony to a stage sense, native wit, and extraordinary talent for organization that belong only to the theatrical greats. Ritchard's got it, and the Metropolitan, fortunately, has got him. What happens when he gives up playing the viceroy (and singing it, in a musical-comedy baritone, with a kind of Rex Harrison impishness) doesn't invite speculation—but one stone out of this cluster will still leave it the brightest thing the Metropolitan has had since Mrs. Astor's diamond stomacher.

NEW YORK had its first view of Josef Krips as the December guest director of the Symphony of the Air in Carnegie Hall. A man of sharply defined musical ideas and ample equipment for communicating them to an orchestra, Krips offered a compact sequence of the Mozart C major ("Jupiter") symphony, the Strauss "Don Juan," and Beethoven's "Eroica" symphony to an audience that about half filled the hall. So far as Mozart and Strauss were concerned (I was unable to stay for the Beethoven) Krips formulated the musical design better than he conveyed the thought content or emotional impact they contain. The clear statement of the Mozart score was, nevertheless, rather prosaic, the well-disciplined Strauss not quite the surging, intense thing it can be under some leadership. Those who cheered and bravoed obviously thought otherwise.

A repetition of Cherubini's "Medea" during the same evening in Town Hall provided opportunity for sampling some of this remarkable score (a main branch on the family tree of Gluck and Mozart) and the present state of Eileen Farrell's vocal art in the title role. The sumptuous sound, with its vibrant middle register and powerful top, was under better discipline than at almost any previous time, the use of it consistently considerate. If she does not command a strongly personal artistry, she does have a closely studied idea of what she is about—though it was surprising to see her depending on the printed page in a work for which she has become more than mildly celebrated. Other participants under Arnold U. Gamson's direction were Martha Lipton, Eva Likova, Albert da Costa, and Miroslav Cangalovic. —IRVING KOLODIN.

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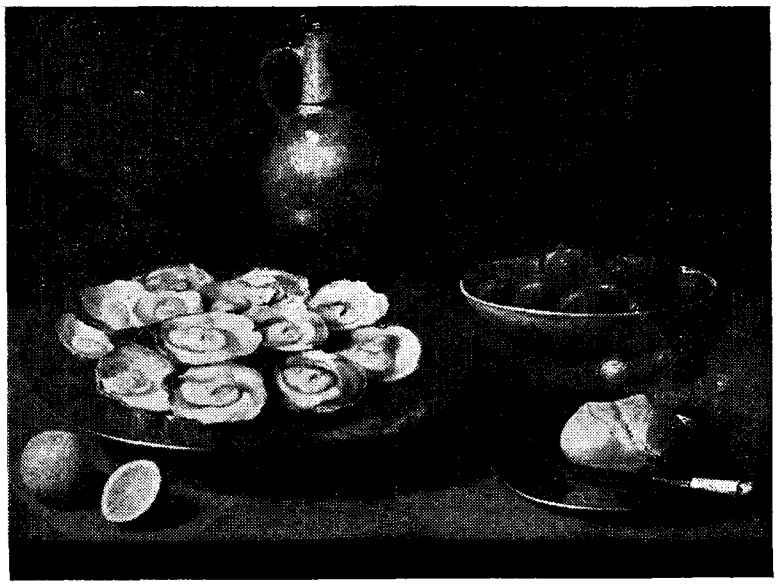
THE FINE ARTS

The Ringling Art Museum



"Still Life with Oysters."

IT WAS during the winter of 1936 that I first visited the John and Mable Ringling Museum of Art at Sarasota, Florida. The building, designed in the Florentine style of the High Renaissance, had been completed only six years before, yet already it was in a bad state of repair, partly because of economies in construction forced on Mr. Ringling by the Depression and partly because its supporting terrain was so swampy that previously it had been inhabited mainly by alligators, rattlesnakes, and other reptiles of unpleasant turn of mind. A bedraggled caretaker motioned toward the main entrance, not bothering to issue a ticket and looking incredulous when asked if there were a catalogue of the collection. As I remember it, he was the only person to be seen at the Museum that day except for gardeners working on the grounds.

Inside the galleries water was dripping down some of the walls and even off some of the heavy frames which alone preserved the pictures from destruction by dampness. Many of these pictures were in desperate need of restoration. I recall thinking that in twenty years almost nothing would remain of the Ringlings' large collection or of the palazzo they had built to house it. I was wrong. Today, thanks principally to the energy and talents of the Museum's present director, A. Everett Austin, Jr., and to the fact that the State of Florida has provided funds for the Museum it now owns and operates, Sarasota can boast of one of the most exciting public art galleries in the country.

When I visited the Museum in 1936 I had heard that Mr. Ringling applied three rather unusual standards in purchasing paintings on his travels abroad: he liked big pictures; he liked to buy a number of them at once; and he preferred, as an impresario of the circus, paintings with animals in them. The story of these standards may be apocryphal. One cherishes it nonetheless, and it is given some credence by the special nature of the collection formed by Mr. Ringling himself. The pictures he chose often *are* big, there are many of them, and some of the most interesting include animals—the seventeenth-century Flemish painter Jan Fyt's "Calydonian Hunt," for instance, with its boar circled by gored or eager dogs, Giovanni Paolo Pannini's "Circe Entertains Odysseus," wherein the sorceress's uneasy gift of turning human beings into animals is given full play, and Nattier's "Presumed Portrait of Louis XV, King of France," whose subject is not only cloaked in a leopard skin but sits in comfort beside a live leopard.

A common denominator of many of the best Ringling pictures is dramatic content. Even without animals to enliven them a remarkable theatrical exuberance is apparent, as in Veronese's superb "Rest on the Flight Into Egypt," Piero di Cosimo's "The Building of a Palace," with its vigor of practical and witty detail, the lush Rubens of Lot leading his family from Sodom, and Guercino's Baroque image of the anguished Joseph trying to keep his eyes off the naked, lovely wife of Potiphar and trying, as well, to keep her determined hands off him. In Mr. Ringling's choice of these and other paintings the taste of a master showman is at work. The level of this taste is often high, and one leaves the galleries with the impression of having seen what may not be the greatest show on earth, but is anyway an exhilarating performance, making most art-historical museums appear subdued by comparison.

Mr. Austin, the present director, is also deeply interested in theatrical matters. But he brings to the task of restoring and expanding the Ringling collection one of the most perceptive and courageous eyes in the international museum world and long curatorial experience, especially at Hartford's Wadsworth Atheneum, which he built up into one of the major museums in the country. He shares the Museum's founder's faith in pictures rather than in artists with five-star names; his predilection, as Mr. Ringling's seems to have been, is for the Baroque. This preference has in no way limited his interest in other styles and periods. Indeed, the list of his acquisitions for the Museum is as distinguished in range as in quality.

Among the most important pictures acquired by Mr. Austin is Rubens's "Portrait of the Archduke Ferdinand," once owned by Sir Joshua Reynolds and later by a tycoon of a different sort—J. P. Morgan. Mr. Ringling had always admired Rubens (there are four Rubens cartoons for tapestries in the Museum, as opposed to two from the same series in the Louvre), but for some reason had never bought one of the great portraits for which Rubens was revered in his lifetime and which today seem a manifest part of his genius. The picture is superbly painted and, as the caption declares in "Fifty Masterpieces in the Ringling Collection" (one of several informative booklets about the Museum and its contents now available), it is evocative in its suggestion through accessories of costume of the transition from war to peace which was one of the Archduke's aims as Governor of the Netherlands.

RUBENS'S Italian contemporary, the Genoese Bernardo Strozzi, is now represented in the Museum by a very fine Baroque work, "The Prophet Elijah and the Widow of Zarephath," acquired in 1950. Strozzi's successor, Alessandro Magnasco, born about a hundred years later, testifies to the

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continuing vitality of the Genoese school with a fascinating and turbulent picture called "A Stormy Sea." Mr. Austin's enthusiasm for Magnasco is of long standing; it has never seemed more justifiable than in this imaginative seascape.. Another of the Director's preferred fields in painting is the Venetian eighteenth century. He has bought for his Museum a monumental work by Giovanni Battista Tiepolo entitled "Two Allegorical Figures," and one of the finest paintings I have ever seen by Luca Carlevaris—"Venice, Piazzo San Marco." He has bought, too, pictures by men whose names we are likely to hear as time and research go on.

Mr. Austin's perception in discovering paintings of first quality by obscure or even unknown painters is the more commendable in that it runs counter to a rising conservatism among many of our museum curators. Consider some of the pictures he has acquired for the Ringling Museum recently: the brilliant "Harlequin with a Richly Dressed Gentleman" (see illustration) and the equally fine "Harlequin the Glutton" by Giovanni Domenico Ferretti; the "Personages from the Italian Comedy" by an unknown eighteenth-century painter, probably from North Italy, the astonishing little "Sleeping Child Christ" by Bartolomeo Schidone, the scintillating "Still Life with Oysters" (see illustration) by a seventeenth-century artist so far lost to sight that there is still some doubt as to whether he was French or Flemish. And a few years ago Mr. Austin organized the first American exhibition of works by Monsu Desiderio, a gifted fantasist working in Naples early in the seventeenth century. Today no survey of Baroque art would be complete without mention of Desiderio's name.

Not content with his inspiring purchases in the field of painting, Mr. Austin seven or eight years ago bought for the Museum the interior of a little theatre which had been built at the very end of the eighteenth century at Asolo, a hill town north of Venice. The interior, complete to astonishing degree, is now being permanently installed in a new building on the Museum grounds. It is not only one of the most important architectural documents ever brought to this country, but a thoroughly rewarding work of art in its own right. It furnishes a memorable foil to the Museum's collection of paintings.

—JAMES THRALL SOBY.

"Harlequin with a Richly Dressed Gentleman," G. D. Ferretti.

Society in Our Times

Continued from page 21

some risks in order to preserve unimpaired the sole reason for its existence—the protection of its people's liberties."

A few dubious historical allusions do not impair the book's argument and can easily be forgiven in a work of such judicious balance and integrity. It is impossible to indicate here all the ground covered in this deceivingly slender volume. The treatment is thorough and substantial, although never dull. It is rewarding reading for anyone interested in his own or his neighbor's freedom.

MAN AGAINST THE STATE: Reconciling traditional American freedom with security programs made necessary by Communist subversion is a problem for many articulate Americans. In his brief Godkin Lectures for 1955, **"National Security and Individual Freedom"** (Harvard University Press, $2), John Lord O'Brian begins (as an eminent attorney with more than a nodding acquaintance with governmental procedures should begin) with the premise that "the nation must protect itself . . . by some kind of security program." But before he is through one wonders whether Mr. O'Brian could accept any kind of effective program. And his unfamiliarity with pertinent details (he mistakenly contends, *e.g.*, that American security rules would not have uncovered Britisher Klaus Fuchs) hardly makes this short volume the definitive word on a still complex topic. —SAMUEL S. STRATTON.

"NO COMMENT": Since most of us, like Will Rogers, know about the operations of government only what we read in the papers our ability to ride herd on those in power depends directly on whether these papers have access to the full story. **"Freedom or Secrecy"** (Oxford University Press, $4) is a casebook study of official efforts to keep various facts and figures out of the papers, written by a man who ought to know, *Washington Post* editor James Russell Wiggins. Though Mr. Wiggins acknowledges the need in an atomic age for some restraint on full news coverage, any information withheld, even for valid reasons, he says, impairs to a degree the effectiveness of free, popular government. Also considered in these pages, but more superficially, is the newspapers' corresponding responsibility in handling the news to which it should have access. Required reading for every official or politician who ever faced a reporter. —S. S. S.

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Verse

Continued from page 20

aeternitatis, the poet as an individual seems to slip away.

Since I myself tend to feel that the theory of impersonality can be carried too far, it is a pleasure to record, nonetheless, that certain names among the contributors definitely stand out—and that if they continue writing after they leave the Halls of Academe (and I do hope that none of them bog down there!) future publishers and readers will hear more of Messrs. Joseph Cary, Donald Lehmkuhl, Edward Locke, and Philip Murray, of Columbia; Alan Gross of New York University; and Jack Hirschman and Herbert Marder of City College. Not to mention Beatrice Bodenstein of Columbia's Graduate School, and *actually* not to mention others. . . .

—Gerald Previn Meyer.

PLAIN STATEMENT OF LOSS: With his third volume of verses, **"Green With Beasts"** (Knopf, $3.50), W. S. Merwin breaks with his previous elegance and aloofness in several important respects. A sound of natural speech and a quality of daily living are introduced, if not with any perceptible change from melancholy and nostalgia then at least with augmented energy and the signs of interest in the contemporary scene.

In substance Mr. Merwin has come around to a plain statement of loss and he does it with the refreshing accents of one who for the first time sets himself prosaically against his fate. This is not to say that he has been consistent in his new approach. More often he continues to seek after the self-consciousness and aching transcendentalism of his first two books, although, significantly, with modifications influenced by his new manner. The bestiary first part is a collection that leans towards the first style, while the second part is about equally divided. The third part almost entirely abandons his new style, with the exception of "The Fishermen." Important, however, is the fact that Mr. Merwin returns to his second more explicit approach often enough to make it meaningful for himself as well as for the reader.

In the two previous volumes the antique myth and the symbol of ornate, archaic overtone predominated. In the present volume there has been a decided loosening up and broadening out to include such palpable matters as nature, art, animals, the social and moral climate, and a distinct expression of religious mood. While not yet abandoning the techniques of the myth and symbol, the elaborate diction has been made to accord with subjects of more immediate interest. One of the best of these poems is "The Station," a contemporary allegory. Nevertheless, it is in poems like "Burning the Cat," "In the Heart of Europe," "Dog," and "The Fishermen" written out of straight observation in sensible rhythm and diction that we are better able to grasp and appreciate the creative affirmation Mr. Merwin has been steadily seeking to convey through a poetry of loss.

Poems such as the "Isaiah of Souillac," in the distant mood of his earlier work, can only hold him back from his purpose, which as can be gathered from his best is a worthy goal indeed.

—D. I.

"I finally got mine to sleep. How'd *you* make out?"

Fable for 1957

Continued from page 22

of man. I must ask that you free yourselves from your utter fascination with the complex and the strategic. The big need now is to put the grand simplicities to work. There is no need to become enmeshed in the supposedly intricate. There is need only to understand the lessons of the past, to develop loyalties to the human community above that of the nation, to comprehend the power of great ideas, to remember always that human life is fragile and precariously balanced, and to have respect for the stretching power of the human being in the pursuit of fine and necessary ends."

And then a man whom all seemed to know but none could name got up to speak.

"It is not enough for us to speak of what is done in these halls," he began. "What happens here can yield great benefit of harm, but what is done or not done outside has large meaning as well.

"I would speak not of the wrong done by evil men in the world but of the wrong done by good men who cannot distinguish between right and wrong.

"There is the wrong that comes from doing nothing. The failure to sacrifice when sacrifice is called for; the failure to become vital advocates in the long struggle to relate nations to one another under the same code that nations insist their own citizens observe among themselves; the failure to put the welfare of the generations to come ahead of our own—all this can lead to a costly and evil result from which all will suffer.

"But it is not the statesmen alone who are guilty of this kind of wrongdoing. The everyday man, wherever he is, who allows himself to feel detached from the condition of the world—he too contributes to the evil. Everyman who feels that the workings of a society of nations are beyond his reach—he too adds to the weakness of the whole.

"The individual who believes he is powerless to affect history—he marks the beginning of the failure that multiplies itself until it finally takes the form of men who smash at the very conditions in nature that make life possible. And the evil will continue until men see their connections to each other and to the large body or community of which each is a part. It will continue until each man tries to act as though the well-being in the world—or the lack of it—flows out of his own thoughts and acts.

"In this sense, Everyman finds all the world in his mirror." —N. C.

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Fiction

Continued from page 15

Maddux has, I think, satisfied this formula. Page by page "The Green Kingdom" takes on increasing aspects of substantiality; our "real horizon" is nowhere to be seen. Only Arthur, of the five characters, is somewhat lacking in definition; but it is Justin and Erma who are most fully realized, who most intimately engage the reader's interest and sympathies. Justin and Erma—and a "feathermane." But until you read "The Green Kingdom" you won't know what I am talking about, for you will have never met a feathermane. They are worth meeting. And "The Green Kingdom" is worth reading. In her story of how man behaves in Eden Miss Maddux has successfully sustained an imaginative flight.

STRANGE BUSINESS IN BAVARIA: West Germany is the scene of **"The Linden Affair"** (Random House, $3), Martha Albrand's latest venture into the trenchcoat and Mauser territory. Dr. Franz Linden returns to his native Munich after twelve years as a Russian war prisoner and receives a government post commensurate with his talents, that of Chief of Security for Bavaria. Linden steps neatly into his old surroundings and his new job, and things go pretty smoothly except for a few Otto Johnish incidents. His daughter Lisa, who has not seen him since she was a child, finds that papa lacks the kindness and sense of humor she had been led to expect; furthermore, he takes his tea Russian fashion, and is a bit foggy on some of his dead wife's tastes. When Linden commits the disturbing gaffe of having his daughter's boy friend arrested for espionage Lisa tells her troubles to Kenneth Ward, a young man who is sleuthing around Munich for a counterintelligence agency. Ward finally discovers what is rotten in Bavaria, but not before he has almost cashed in his chips a couple of times. Though "The Linden Affair" hinges on a well-worn gambit, Miss Albrand's attention to character and atmosphere keeps it from being trite.

—Martin Levin.

EGYPTIAN ADVENTURE: Ruth McKenney's first foray into the genre of the massive historical novel is a gigantic cyclorama of Napoleon's Egyptian expedition which she has entitled **"Mirage"** (Farrar, Straus & Cudahy, $4.95). It was Napoleon's fancy to take with the Egyptian army a large task force of *savants,* men who were the nation's leading mathematicians, historians, chemists, astronomers, linguists, and archeologists. (The chief result of all this was the beginning of what has since been called Egyptology, the finding of the Rosetta stone, and a tremendous pillaging of art objects.) Among the *savan*'s was Gaspard Monge, who analyze and named the perplexing desert m rages which provide Miss McKenne with her title and text, and Miss M Kenney makes double use of the i usive character of the message—fi t, as bearing upon Napoleon's whole areer and particularly his dream of being a latter-day Alexander; and s cond, as bearing upon the vision o love cherished by her novel's hero, Rémi Saint-Victor, a secretary to Nap leon.

The young Saint-Victor, a bi lliant chemist who was the son of a w althy bourgeois, had been imprisonec dur- ing the Revolution. Miss McKe ney's long preliminary story of Rémi suf- fering in prison, of his delive ance, and of his recovery, is almost verwhelming. It is perhaps the foi most of a number of notable achieve ients in the book. These include he ac- counts of the French fleet's voy ge to Egypt, narrowly escaping the pursuing Lord Nelson in a fog; the landing of troops near Alexandria; Nelson's destruction of the French fleet at Aboukir Bay; the battle of the pyramids, and several vignettes of the early career of Bonaparte. But, unhappily, for all its occasional brilliances, I found that reading this large book was a grinding labor. The burden is compounded through Rémi's complex love life and by repetitious, inherently ludicrous erotic passages.

—Edmund Fuller.

LOVE IN THE TWENTIETH CENTURY: The title of Wirt Williams's second novel **"Love in a Windy Space"** (Reynal, $3.50) is, unfortunately, too accurate. Mr. Williams attempts to depict the "value" crisis of our times through the form of a love story. His lovers are so lacking in self-perception that they are not people but neurotic syndromes on legs, and the book resolves itself into a portrait of two Sick Ones pecking themselves into oblivion. One can't argue if this is Mr. Williams's view of things; one can only say that in this instance it has made for unsatisfactory fiction.

Wilson Renley, erstwhile naval captain and now New Orleans publicity man with an itch for absinthe and sex and a horror of entangling alliances, is chugging along the shiny road to nowhere. Into this void comes Joan Beauchamp, divorced, beautiful, and an unconsummated college sweetheart of seven years before. She, too, has Nothing but she wants Something. Renley appears to be It.

So commences one of the most wretchedly flip-flopping love affairs of this value-bereft twentieth century. The dialogue runs to small-talk, smart-talk, and sex-talk. Through it all Mr. Williams labors to convince us that he means something big.

Although his current novel fails, one puts it down with the feeling that he has better books in him by far.

—Gerald Walker.

INTROSPECTION IN THE SOUTH: "Thunder in the Room," by Harris Downey (Macmillan, $3), concerns itself with a day in the lives of some deeply introspective residents of a Southern city. Officer David Yancey, whose predicament is the focus of the novel, is certainly entitled to be pensive; he is about to be executed for the murder of the local police chief, whom he throttled for pilfering the Benevolent Fund. Stella Madden and Lucy Warren, two ladies who are vaguely concerned with Yancey's fate, have less excuse than Yancey for moodiness, but are continually enmeshed in jittery reveries that leave them forever on the brink of hysteria. Mrs. Madden, the governor's wife, feels hazily restive about the condemned man. Mrs. Warren, a widowed schoolteacher, feels that Yancey is "a victim of society's ill"; she is also emotionally attached to a cat called Tiber and bursts into tears at the sight of an unexpected guest. Neither of these neurotic ladies is of much help to society's victim—nor to Mr. Downey's novel, unfortunately, which is held almost motionless in a bog of interior monologues.

—M. L.

LITERARY I.Q. ANSWERS

Column Two should read 14, 8, 10, 3, 4, 7, 11, 12, 2, 5, 6, 15, 1 or 9, 13, 9 or 1. Details: 1. Paul Cézanne. "L'Oeuvre" by Emile Zola; novel. 2. José Clements Orozco. "Man of Fire" by MacKinley Helm; biography. 3. Peter Brueghel, the Elder. "Droll Peter" by Felix Timmermans; novel. 4. El Greco. "Bird of God" by Virginia Hersch; novel. 5. Henri Toulouse-Lautrec. "Moulin Rouge" by Pierre LaMure; novel. 6. Vincent Van Gogh. "Lust for Life" by Irving Stone; novel. 7. Grant Wood. "Artist in Iowa" by Darrell Garwood; biography. 8. Benvenuto Cellini. "The Florentine" by Carl J. Spinaelli; novel. 9. A composite figure of Manet and Cézanne. "The Masterpiece" by Emile Zola; novel. 10. Francisco Goya. "This Is the Hour" by Lion Feuchtwanger; novel. 11. Eugène Delacroix. "To Seize a Dream" by Virginia Hersch; novel. 13. Francisco Goya. "In the Blazing Light" by Max White; novel. 14. Paul Gauguin. "The Moon and Sixpence" by W. Somerset Maugham; novel. 15. Peter Paul Rubens. "The Horn and the Roses" by Ira Wallach; novel.

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Dialogue on India

Continued from page 10

brokenhearted at the ghastly riots in 1947. But India seemed to recover from that. When we were in Pakistan in 1955 Sikhs living across the border in the Punjab who were once hated by the Pakistani were invited to come over and spend the day in Lahore. Ten thousand came.

The government expected trouble but instead of trouble they had the greatest holiday in the memory of the oldest citizens. Everything was free. Sikhs and Moslems walked down the street, arm in arm. It was a tremendous exhibition of goodwill, all in the name of Gandhi.

Gandhi used to say that India owed a great deal to the British, because their respect for law made India's advance to freedom possible without violence. Nehru once said to me that "terror with a conscience" could never be effective, and that though the British often practised terror it was always with a conscience.

No matter what the British authorities did to quash the independence movement in the Thirties and Forties some M.P. would always rise in the House of Commons, back in London, the next day to speak eloquently on Indian freedom. Then there was always the conscience of the British judge to stretch the law a bit to give the Indian leaders, Nehru, Gandhi, and their Congress Party associates, the opportunity fully and fairly to plead their cases. And there was the conscience of the British newspapers that printed those speeches. If only some of this kind of spirit could be injected right now into Africa and the Middle East!

CHIEF JUSTICE: The Indian Ambassador to the United States, His Excellency Gaganvihari Lallubbai Mehta, made a very interesting address only a short time ago in which he compared their Gandhi with our Lincoln. It was a moving experience which showed these two men of good will and simplicity pursuing their useful lives to their very deaths, when both were killed by assassins' bullets.

GOVERNOR BOWLES: Nehru has a bronze reproduction of one of Lincoln's hands on his desk. He has read Lincoln thoroughly and deeply admires him.

CHIEF JUSTICE: Yes, I know Prime Minister Nehru greatly admires Lincoln. He showed me the bronze replica of Lincoln's hand which he keeps on his desk as an inspiration. I was struck by one thing in India, and that is that, while we glory in the fact that many of our Presidents rose from a log cabin to the head of our Government, India prides herself also on the fact that many of her people of wealth and standing in the economic world have given it up and pursued their work in poverty and sacrifice, such as Gandhi and even the present Prime Minister.

GOVERNOR BOWLES: The Indians are proud. They respect our integrity and good intentions, but they want us to respect theirs. Sometimes we scold them, and they naturally resent it. They need loans and economic assistance, but above all they seek respect as honest people trying to work out their own destiny through democratic methods. In pulling back from the Cold War conflict as they sometimes do—which so often upsets and mystifies us—they are simply trying to keep diplomatic doors open through which the world may eventually come together. The day may come when we will be grateful for their patience.

Let us also remember that the Indian experiment is being conducted in Asia alongside an experiment of a very different type, Communist China. Naturally there is a mood of competition that all Asia is conscious of and I believe it may ultimately be decisive. Countries come and go, but rarely in history have there been two systems so totally different in form on display at one time in areas with almost the same standards of growth and development. This makes the success of democratic India all the more important. Christ was an Asian and so was Buddha. Their ideas of human dignity and growth spread to the West, but to the Asians they remain at least equally meaningful.

CHIEF JUSTICE: They are devoted to democracy. That's why they're interested in everything we do; they feel a sort of kinship with us. As a matter of fact, they feel that our American institutions are more like theirs than England's, because England is such a small country and we are a federation like they are.

They treated Mrs. Warren and myself wonderfully on our trip, respecting scrupulously my position and never asking me to discuss political matters or any legal matters which would come before our own Court here. To see the Indians at home going about their hard work quietly and uncomplainingly—when so many of them are just one step ahead of starvation—was one of the most moving experiences of my life. They know their leaders are dedicated to their service. They ask for nothing but the opportunity to create in dignity their own place in a world they themselves have helped to create for more than 5,000 years.

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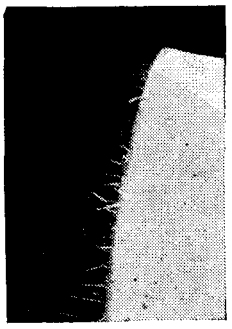

SR/Research

SCIENCE & HUMANITY

DEPARTMENTS: Research in America • Letters to the Editor • Personality Portrait—X • The Research Frontier • Science in Books

ARTICLE: What Hope Does for Man • Alphabet of Life

RESEARCH IN AMERICA

- *TIN WHISKERS*
- *INSECTISUICIDE*
- *PEACE ON ICE*

WHAT you see in our masthead photograph this month are quite obviously whiskers. But they are not the scraggly survivors of a close shave on the chin of S. Claus. They are sprouts of tin which grew in some mysterious way from the surface of a strip of tinplated steel. The growth took place inside an ordinary glass jar, which was kept at room temperature in the Bell Telephone Laboratories for about three years. Although our picture was taken through the lens of a microscope, the size of the tin hairs is not inconsequential, extending up to three-sixteenths of an inch in length.

One of these whiskers, a single hair of pure zinc, cut off a long-distance telephone call more than five years ago. At that time no such thing as a metal whisker was known to exist. A trouble-shooter was dispatched to open the silenced phone line, and he, in time, discovered a short circuit in a wave filter—the device that makes possible dozens of simultaneous conversations over one telephone line.

Outwardly, the filter seemed perfect. But an engineer who studied it under a magnifying glass noticed something that glinted. The something looked like lint, except that it was much finer than lint. Over this something, and eventually into the earth, was escaping the electricity which should have been carrying voices.

Thorough examination proved that the something was a whisker that had grown from a zinc-coated bracket. Since then scientists in the Bell Laboratories have been studying which metals grow whiskers and which do not. In addition to zinc, cadmium and tin do. Gold does not.

All this comes under the heading of pure research. But sometimes pure research can be applied with incredible speed. And it has been so in the case of metal whiskers. Telephone calls over the newly laid transAtlantic cable, for example, will be free of this new type of five-o'clock shadow because gold was substituted for tin in the repeaters which kick up diminishing voice volume along the sea floor.

Now that metal whiskers are known to exist, the Bell Labs researchers are trying to learn which of them can be artificially stimulated. Thus far, it has been determined that tin whiskers grow faster under atomic radiation bombardment.

One of the most interesting facts about metal whiskers is that their strength far surpasses the strength of the metal from which they sprout. By studying the growth, structure, and physical properties of these bizarre strands under the electron microscope, science expects to custom-tailor stronger, more durable metals.

• • •

JUST about the same time that the telephone repairman was finding the first zinc whisker, a team of researchers in the instrument division of General Electric at Lynn, Mass., were setting out on a quest which led them to discover how to grow iron whiskers.

These particular whiskers are bound to be talked about a lot, for on the night of December 26 they won G.E. a prize—the first Industrial Science Citation in the history of the American Association for the Advancement of Science. The talk is not likely to tell very much, however, because every one of the whiskers is magnetic and magnetism contained in so tiny a space is a precious trade secret that will not be revealed until it is patented. All G.E. will say at present is that round grains of iron dust have been stretched out into thin hairlike spikes which hold onto their magnetic power 100,000 times as tenaciously as ordinary magnets do.

To understand how this can be, it is necessary first to review the enormous knowledge about magnetism that science has accumulated in the last ten years. To begin with, every atom has electrons whirling in orbits around its nucleus. And every electron has a spin of its own. Associated with this spin is a magnetic field. In most atoms there are just about as many electrons spinning clockwise as counterclockwise, so that their magnetic fields tend to cancel each other out. But in a few elements such as iron, a significantly greater number of electrons spins in one direction than the other, building up a net magnetic field for each atom. When the atoms (let's take iron as the best example) are brought together to form a solid crystal of iron, their magnetic fields run parallel, thus intensifying the effect until finally there is a magnet.

This paralleling occurs, however, only in local regions of the iron crystal. Each region is called a magnetic domain. An ordinary piece of iron contains many domains, some aligned in one direction and some in another. When a magnetic field is applied to the iron, the magnetism takes hold of the boundaries of the domains just as you might take hold of the sides of a box, and it swings all the domains around in the same direction. To make a permanent mag-

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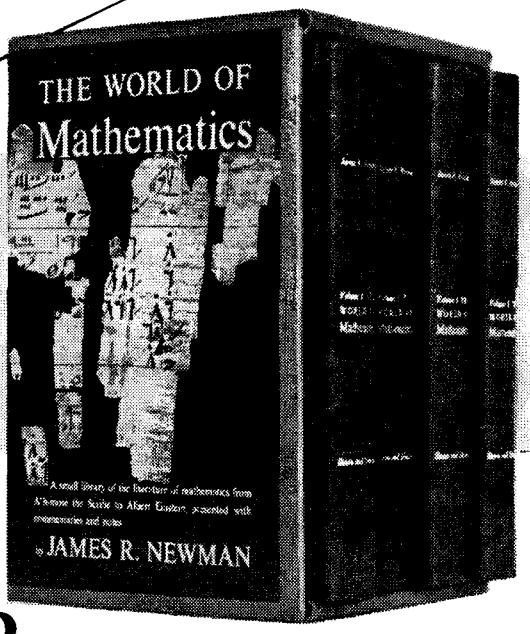

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net, then, the trick is to line up the domain boundaries the right way and hold them there.

Of course, if you could make the domain smaller than the boundary itself, you would eliminate the boundary and there would be nothing left to move. That is precisely what the G.E. scientists did when they grew the iron whiskers. Each of these fabulous hairlike spikes is only one millionth of an inch thick. It takes a billion billion of them to weigh a pound. Once they are lined up in the right direction, it is almost impossible to get hold of them and move them again. So their magnetism is fixed.

All this was explained by Dr. Thomas O. Paine, head of the G.E. research team, to a half-hundred top industrial science brains of America when he accepted the AAAS citation. He went on to make a prediction: "For all practical purposes, the magnetic properties of this material can be controlled precisely to duplicate the desirable qualities of any available magnet." The iron whiskers can be molded in plastic, metal, rubber, or glass. Resulting magnets can be machined into any conceivable shape, drilled or tapped to fit into the oddest possible spaces.

In the next three to five years the iron whiskers are expected to make electrical instruments smaller, lighter, tougher, and more accurate. Airplanes, which carry several hundred magnets each to activate vital switches and controls, can be slimmed down, radio sets will dwindle in size, hearing aids will be practically invisible.

• • •

WHILE we are on the subject of awards, we'd like to report, with more than passing pride, that one of the contributors to our FRONTIERS page has just been announced as winner of the highest honor in American chemistry—the gold Priestley Medal. He is Dr. Farrington Daniels, a native of Minneapolis and now chairman of the department of chemistry at the University of Wisconsin. Dr. Daniels is an authority both on the atom and on solar energy, the principal competing sources of power for the future. Formal presentation of the Priestley Medal will be made by the American Chemical Society next April.

• • •

A MAN who shared a table with us in the dining car of a Pennsylvania Railroad train between Washington and New York told us his company is now experimenting with a new type of insecticide. The insect never knows the cause of its own demise. The bug bites an animal and succumbs, not having lived long enough to suspect the truth—that it dipped into a poisoned blood stream.

The poison gets into the animal's blood because the animal swallows the insecticide. Why the animal isn't poisoned in the process is an undisclosed secret of chemistry. Present custodian of the secret, the man on the train told us, is his employer, Dow Chemical Company of Midlands, Mich.

"It's powerful stuff," he confided. "A fellow I know gave some of it to his cat. Fleas dropped like dandruff."

• • •

"MIRNY" is the Russian word for peaceful. It's the name they have given to their main operating base on the Antarctic continent during the International Geophysical Year (July 1, 1957-December 31, 1958). Whether they mean it or not is a question that will be answered authoritatively two years hence by a weatherman from Newcastle, Penna. Gordon Cartwright is his name, and he has been assigned as the only United States scientist who will live among the Reds at the bottom of the world. Before he can learn the Russian intentions, Cartwright will have to learn their language. He practised fundamentals in Washington for several weeks before taking off for Capetown, South Africa, whence Mirny is a seven-to-ten-day journey.

"Of course, I expect them to be friendly," Cartwright told us during an office chat. "After all, they did invite me."

The invitation was one of those diplomatic double-takes. American scientists started it by setting up a central weather reporting station in Antarctica for the IGY. At the time they did so they expressed the hope that at least some of the forty nations cooperating in the IGY would send observers. Moscow was first to jump at the offer.

"Is it okay to accept a Russian?" the scientists asked the State Department. "Okay," said State, "if the Russians will accept some one of ours as a guest."

As that guest, Cartwright will be all alone among the Communists, 1,500 miles across the ice from Little America.

• • •

WE'VE already reported (*SR* Oct. 6) that from August 10 to 15, 1956, half a hundred cancer specialists of the International Union Against Cancer held a symposium in Rome. Subject of their discussion was: how serious is the threat of food additives in the causation of cancer? After everyone was talked out, they adopted a unanimous report recommending a new approach to the problem—legal banning of any additive to food until after the additive is proved innocent of all cancer possibilities.

Chemical interests in the United States have been complaining that such legislation would be economically ruinous. They have attacked Rome symposium findings as "extreme" and "sensational" and "alarmist." They have turned for support to the Food Protection Committee of the National Academy of Sciences.

"What is *known* concerning a definite relationship between ingestion of a substance and the subsequent development of cancer in man?" the Committee asked in a public statement, then replied: only that radium ingestion has caused cancer of the bone, that certain aromatics have been associated with cancer of the bladder, and that prolonged intake of arsenic may produce cancer of the skin. "Do these materials occur in the United States? Arsenic is the only one. It may occur in some foods in extremely small concentrations as a pesticide residue and is normally present in certain foodstuffs which have received no pesticide treatment. Insofar as is known, there is no danger from the amount of arsenic likely to be consumed from these sources under ordinary conditions."

That, however, turned out to be small comfort for those who wanted a clean bill of health for all food additives now used in this country. For the Academy statement continued:

"If this were all of the story, probably no public apprehension would have arisen.

"Investigators studying cancer have induced the development of tumors in experimental animals by purposely exposing them to a number and variety of chemicals. Such experimental cancer may be produced in animals by giving the agent by injection, by skin application, or orally. From this evidence and knowledge of how man may be alike or different from the experimental animal in the metabolism, excretion, or storage of a particular chemical, the scientist can form a hypothesis as to how man might react to the ingestion of the chemical. In this respect, the conservative position would demand that substances that produce cancer in experimental animals should be excluded from human foods as a precautionary measure, even though it is known that a substance carcinogenic (cancer-provoking) in one species is not necessarily carcinogenic in others."

• • •

NEW diseases are rare, they are difficult to define clearly, and reputable physicians are careful about proclaiming them. But an Alaskan

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general practitioner, Dr. J. B. Deisher, has gone out on a limb and announced that "Iceland disease" is a brand-new distinct illness which looks much like but is not polio.

Dr. Deisher told the tenth annual clinical meeting of the American Medical Association that outbreaks of "Iceland disease" have occurred in Iceland, Alaska, the eastern United States, Great Britain, Europe and Australia.

Deaths from the illness are few, lasting paralysis occurs seldom, but women especially are driven wild by muscular and nervous tension, particularly during menstrual periods. "Their husbands," the Alaskan practitioner declared, "might just give up and leave."

• • •

WE PICKED the wrong bottle from our sky chemistry set when we poured out last month's story about "the twilight flash." As usually happens when wrong ingredients are used in an experiment, we came out with a misleading result. Our conclusion was that "the twilight flash" —a momentary brightening of the sky just after sunset—is a photochemical effect of sodium and oxygen combining in the upper atmosphere. The truth is that "the twilight flash" is merely the light of the setting sun hitting sodium atoms far up in the sky and bouncing downward on the darkening earth.

The scientific name for this mirror effect of the sodium is resonance absorption and emission. It is notably different from a photochemical process—one in which the energy of light changes a chemical into something else. Example of photochemistry: light strikes oxygen molecules, splitting them into oxygen atoms, which then combine with other elements.

The process we really described in our item about sodium being released from a rocket forty-two miles up at 2 a.m. was *neither* resonance nor photochemical. It was chemi-luminescent, the reverse of photochemical. In chemi-luminescence a chemical change produces light. What Dr. Edward Manring and John Bedinger, his associate at Cambridge Air Force Research Center, actually did, then, was to free sodium which combined with oxygen atoms in the air and burned with a bright yellow glow.

The essential scientific discovery which we reported remains true: sodium is now established as one of the best if not *the* best yardstick we have of the varying density of earth's atmosphere.

—JOHN LEAR,
Science Editor.

LETTERS TO THE SCIENCE EDITOR

RED ON THE WILD BLUE

THERE WAS A lot of discursive analyzing about the pure and applied sciences' effect upon humanity in *SR* Dec. 1. This seaman, always anxious to get the latest *SR* when ashore, is moved by an irresistible impulse to applaud this new addition in *SR* as a department. Two articles were so outstanding that I couldn't help the effort of using my mind and writing a letter to the editor. I'm referring to "The Fairy Tadpole" and "Knowledge Goes Berserk."

It so happens that communications is my job. Many times, as I have sat before my "Einstein" (professional telegrapher's nickname for his Morse key) in my freightship radio shack somewhere on the high seas, I have wondered what would happen if I buzzed radio operators in all capitals and just said "Good Morning!" Very probably the ruling prejudices would doom me in the radio stations around the world, my shipmates would give me the deep six if I identified my station or told them about it.

The impossibility of human communication as it is now constituted seems evident from a recent experience of my own. Leaving Rijeka (formerly Fiume), Yugoslavia, I could not resist the compulsion of radioing the Yugoslav pilot boat radio operator (with whom I had exchanged several messages) and asking him a simple question:

"Brother, how is Communism?"

"Please repeat," he radioed back.

"Brother, tell me, how is Communism?"

"Sorry," was his answer, and I was glad I asked the question on the way out of Rijeka instead of entering the port. Doesn't this prove that knowledge is berserk?

HARRY B. ANTROTTER.
Radio Officer,
S. S. *Santa Maria.*

LOST DOG

IN *SR* DEC. 1, you published an article entitled "The Literature Scientist," in which it was stated: "The shortcoming of the Uniterm system is that a reader who wants to study, let us say, dogs, has to look up all the different breeds of dogs instead of just looking up 'dogs,' as can be done with Western Reserve's number models."

Unfortunately, your editors have been using a faulty information source. The statement quoted above is nothing more than misinformation.

With a Uniterm index, a searcher could obtain information on "dogs," "terriers," or "fox terriers," simply by looking up any individual term. The inclusion or omission of any specific term in a particular Uniterm index depends always upon the level of indexing desired by its prospective users. That is, in one index the term "dogs" might be omitted, while in another "mammals," "vertebrates," and even "animals" might be included. A company specializing in research would probably want its index to include "vertebrates"; while the index to a library of a zoo would have no need whatsoever for anything of a higher level than genus names.

Your article has unwittingly detracted from the Uniterm system's great advantage over other systems: its universal approachability.

NORMAN GROSSBLATT,
Documentation, Inc.
Washington, D. C.

EDITOR'S NOTE: *Our "faulty information source" was an official of the National Academy of Sciences. The scope of his knowledge and the degree of his objectivity are indicated by his appointment to the Academy committee which is planning an international conference on scientific communication problems for 1958. After a reading of the above letter, he says: "Your treatment of the Uniterm system was entirely fair and correct. Uniterm users can adopt generic terms as Mr. Grossblatt suggests, but in doing so they abandon the classification method on which Uniterm is based."*

CONCAVE-DWELLERS?

WOULD YOU BE so kind as to follow up on a scientific prediction we herewith make.

According to official announcements, measuring satellites will be launched during the International Geophysical Year of 1957/58. The satellites are expected to revolve about the earth for weeks, in a height of several hundred miles, at a speed of about 18,000 m.p.h. The necessary presupposition, of course, is that the customary astronomical conceptions be correct, particularly that the earth has the shape of a globe.

We now are in the possession of extensive SCIENTIFIC data which PROVE the astronomic conceptions to be FALSE, and indicate that the earth has the shape of an enclosed CONCAVE sphere. As a consequence, the satellites started under the usual presuppositions must necessarily drop back to the earth surface within half an hour.

Considering the conflicting expectations made on both sides, the result of the satellite experiments will be decisive as to the shape of the earth as well as to the entire cosmological conception—provided that subsequent excuses (such as alleged non-completion, alleged technical defects, alleged cosmic radiations, etc.) are not permitted, from the outset.

For the sake of this vital decision, we request that you follow up on the course of the satellite experiments. We should appreciate it very much when you would also instruct your entire staff accordingly.

HELMUT K. SCHMIDT,
Gesellschaft für Erdweltforschung.
Munich, Germany.

THE STRONTIUM THREAT

YOUR REPORT on strontium-90 fallout (*SR* Dec. 1) was interesting. I would like to ask you to clear up several points on which you seem to have information that I have not yet been able to get. What are your sources for the 3/1 (reservoir to fallout) ratio? Does the "minimum safe dose" referred to in your article equal the AEC's "maximum permissible

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concentration"; and, if so, when does your source say this level will be reached and under what sort of weapons testing program?

You seem to have a picture different from mine of the way Sr-90 enters the human body. You talk about "our share" and the other share that is "falling on the ground." You imply that the ground fallout may unexpectedly concentrate itself in plants and animals, thence infect humans in whom, appearing with unheralded, additional strength, it will cause disease. But I would like to know by what method Sr-90 enters the body, other than with natural calcium that has been polluted by ground fallout.

JOHN B. VAN SICKLE.
Cambridge, Mass.

EDITOR'S NOTE: *Our data on the amount of strontium-90 now loose in the heavens came from a paper Merril Eisenbud read for the AEC at the winter meeting of the National Academy of Sciences in Washington, D. C. His reference to a safe minimum dose was a general statement, issued for public consumption and accepted in that sense by the Science Editor, who feels that entirely too many technical dodges are being used to obscure the appalling extent of established knowledge about strontium-90. Neither the AEC nor any other official or scientific source has questioned the propriety of adding Eisenbud's one-quarter-of-a-safe-dose to the one-third-of-a-safe-dose attributed to X-rays by the Academy's panel on biological effects of atomic radiation. On the other hand, our attention has been directed to experiments which indicate that strontium-90 substitutes for calcium wherever opportunity affords but does not always* displace *it. The vast area of ignorance, or at least doubtful knowledge, about strontium-90 includes the avenues by which that cancer-causing chemical enters the body. It is known, however, that strontium can be breathed into the lungs and absorbed through cuts or wounds in the skin.*

WATCHER OF THE SKIES

(ON FIRST LOOKING into Whipple's Moon-tracking)
'Tis not too simple to absorb
The appellation of the Plorb,
That science-sport of placing a moon
In an orbit in space . . . Why couldn't the lun-
Ar rocketeers have chosen a name
With happier sound for a skyline game?

O'Reilly's Glob was perfect choice
For Man when he was less than oys-
Ter. Now—when all the world will eye
The heavens through the IGY
(The International G-p Year)
To watch the man-made moon appear,
Outracing the real moon fifteen times—
Alas, it rings no bell nor chimes
To have this brand new fun celestial
Ruined by a word so bestial.

PLORB! . . . We need a brand new Keats
To name with grace such stellar feats.

PERSIS SMITH.
Martin's Creek, Pa.

(Left to right) Dr. John Bardeen*. Dr. William Shockley* and Dr. Walter H. Brattain, shown at Bell Telephone Laboratories in 1948 with apparatus used in the early investigations which led to the invention of the transistor.

Bell Telephone Laboratories Salutes Three New Nobel Prize Winners

Drs. John Bardeen, Walter H. Brattain and William Shockley are honored for accomplishments at the Laboratories

The 1956 Nobel Prize in Physics has been awarded to the three inventors of the transistor, for "investigations on semiconductors and discovery of the transistor effect."

Their revolutionary contribution to electronics was made at Bell Telephone Laboratories in Murray Hill, N. J. Discovery of the transistor was announced in 1948. Bell Laboratories is proud to have been able to provide the environment for this great achievement.

This is the second Nobel Prize awarded to Bell Telephone Laboratories scientists. In 1937 Dr. C. J. Davisson shared a Nobel Prize for his discovery of electron diffraction.

Such achievements reflect honor on all the scientists and engineers who work at Bell Telephone Laboratories. These men, doing research and development in a wide variety of fields, are contributing every day to the improvement of communications in America.

**Dr. Bardeen is now with the University of Illinois, and Dr. Shockley is with the Shockley Semiconductor Laboratory of Beckman Instruments, Inc., Calif.*

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A Scientific Report on

WHAT HOPE DOES FOR MAN

Hope, like faith and a purpose in life, is medicinal. This is not merely a statement of belief, but a conclusion proved by meticulously controlled scientific experiment. A famous physician here reviews the evidence and, in the spirit of a New Year's resolution, urges people everywhere to re-examine the means by which they strive to attain their ends—and so profit in terms of health and happiness.

By HAROLD G. WOLFF, M.D.

CLAUDE BERNARD, the great French biologist of the early nineteenth century, saw disease as the outcome of attempts at adaptation to noxious forces. These responses, though appropriate in kind, he saw to be faulty in amount. He suggested that the adaptive response, in its intensity, could be more destructive than the original assaults, and that an individual might be damaged gravely through the wrong magnitude of his defensive reaction. For instance, the presence of micro-organisms in the lung evokes cellular and humoral responses that serve to meet invasion and do so effectively. Yet the magnitude of the responses may lead to congestion of the lungs and pneumonia.

The provocative effect of the scope and simplicity of Bernard's thesis cannot be overestimated. His brilliant definition of disease dealt with primitive biologic levels of reaction. Whereas these hold for man, disease in man has a more complex meaning, since his attempts at adaptation involve a highly developed nervous system. With his elaborate brain he is so constituted that he reacts not only to actual assault but to threats and symbols of danger experienced in his past which call forth reactions like those to assault. Also, man's special relation to man introduces another set of factors. Hence, backed by long bedside experience and the realization that much of medicine is the understanding of human motivation, physicians in scattered centers throughout the world have turned their energies into studies of man in his context and the pertinence of this relationship to disease. Enthusiastic about the new wave of interest in purpose and goal, they have become convinced that the scientific method is suitable for such study and can be applied. They are challenged by the opportunity, on the one hand, of keeping medicine compassionate, and, on the other, of making it even more scientific and dynamic.

It is noteworthy that naturalists, and more particularly zoologists, have long, by preference and training and with delight and profit, observed living creatures in their context, attempting to understand the goal-directed behavior of insects, animals, and birds. This preference of the naturalists and their point of view is appraised amusingly by the Spanish physiologist, Suner. While physiologists, says he, built their science by means of designed experiments, biologists built theirs by observing the experiments of Nature. Designed experiment divides phenomena into small sections of space and time. Naturalists, on the contrary, freely observe the course of life on a big scale.

Thus, looking at living creatures in their environment, naturalists have described what have been called "displacement patterns," by which they mean the performance of a behavior pattern in biologically inappropriate circumstances when an appropriate action is blocked. The behavior does not directly serve the survival of the individual or the species. Biologically, it is irrelevant to the situation in which it is performed. For example, a wild rat feeding, disturbed by another rat of a different species, makes aggressive noises and motions toward the interloper. The latter flees. Then, the first rat, instead of immediately resuming feeding, briefly grooms its face with its forepaws, an action which it would not ordinarily perform in the middle of feeding. Deprived of the object of its aggression, the first rat resorts to an alternative and inappropriate behavior pattern.

If an animal has open to it two conflicting patterns of action, it may do something else, which is entirely inappropriate. Thus, a herring gull in a situation calling for either attack or flight when neither is possible may resort to grass pulling.

Gulls also have been studied during the period of sitting on their eggs. If one egg is removed from the nest, the gull starts completely inappropriate nest-building movements. When more eggs are removed the nest-building movements increase and the number of such movements in a given time increases in proportion to the number of eggs removed. Preening increases markedly when all the eggs are removed. This affords a splendid

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example of the quantitative expression of displacement behavior.

I would now invite you to see man, his behavior, and his diseases as would a naturalist—one who delights in observing living creatures in their context and attempts to understand their goal-directed behavior.

Does man exhibit such inappropriate responses or displacement behavior as the rat or the gull? Can his organs and functions be so disordered during inappropriate responses as to give rise to pain, be relevant to disease or even survival? The answer is, yes.

Over the years one organ or system of organs after the other has been studied in man functioning in his context. It has been shown, for example, that in a setting perceived by an individual as presenting a certain type of threat, the mucous membrane lining of the stomach becomes intensely engorged, its acid secretion greatly accelerated, and its rhythmic contractions augmented. This is the stomach pattern of a man preparing to eat a meal. Under circumstances that call for entirely different reactions of aggression or striking in anger, the individual inappropriately evokes an eating pattern! Obviously, since the eating pattern cannot resolve the situation that evoked it, it is excessively prolonged and peptic ulceration may ensue.

In kindred studies of the large bowel it has been observed that in those who perceive themselves as threatened in a given way, great quantities of blood engorge the mucous membranes and motility and secretion are increased. This is the pattern of ejection—one that could be used in ridding the organism of materials inadvertently taken in, yet it is used inappropriately to help the man rid himself of an unattractive human problem that cannot be dealt with this way. Abnormal secretions and breakdown byproducts may then destroy the lining of the bowel, resulting in ulcerative colitis.

Studies of the mucous membranes of the nose, upper airways, and lungs have shown that circumstances perceived by an individual as threatening may result in engorgement of the mucosae, contraction of smooth muscle of the airways, and even spasm of skeletal muscle. The eyes may tear and close. This is the pattern evoked by dangerous gases, fumes, dust, and micro-organisms and serves to shut out, neutralize, and wash them away. Yet it is used by the subject in dealing with an offensive man-to-man situation. Because of excessive and inappropriate use, the result may be chronic infection, chronic obstructive disease and asthma. Alterations in the chemical make-up of the secretions within the lungs may end in tuberculosis by affording an opportunity for organisms to reproduce that otherwise would die.

Under circumstances that threaten an individual's fulfillment of his role as a man, the blood vessels about the head may dilate painfully and the great sheets of muscle of the head and neck may go into cramp.

Many skin disorders arise under threatening circumstances because of inappropriate responses of the blood vessels and unusual secretions in the skin. Under like conditions, the kidney may be damaged because it gets too little blood, with great outpouring or retention of water and salt. So also may the heart and blood vessels of the body overwork and excessively contract as though a man were facing a crisis of fight or flight, or stopping a mortal hemorrhage, when, indeed, he may be sitting quietly in his office chair.

When a person sees his prestige endangered, the glands of internal secretion—the pituitary, the thyroid, and the adrenal glands—may respond as though his very existence were in jeopardy, as by starvation, or by the sudden unusual demands of violent action or of very low temperature.

Contraction of the muscles of the extremities and back, inappropriately responding to threatening circumstances by preparing the individual for prompt action that never takes place, may cause cramps and aches.

Even the master organ, the brain, shares in such evil effects. Thus, infants and children in a hostile atmosphere may not mature, and indeed may act as idiots. Men exposed to the prolonged abuse and hatred of their fellows, as in prison, behave as though their theretofore actively functioning brains were severely damaged. Complete isolation, lack of opportunity to talk, repeated failure and frustration, revilement by his fellows, makes a man confabulate, become more suggestible, and rationalize his own unacceptable behavior. He may abandon a value system for one utterly incompatible with his former principles. In short, the effects of prolonged adversity on brain function may be difficult to distinguish from the results of actual destruction of brain.

No organ or part of the body is spared during these inappropriate responses so suggestive of the displacement behavior pattern of the rat and the gull. The general inference is that during the process of adaptation a threatened individual uses inappropriately, and for prolonged periods, functions and parts that cannot help

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DR. HAROLD G. WOLFF: professor of medicine (neurology) at Cornell University Medical College, associate professor of psychiatry at the same school, and editor-in-chief of *Archives of Neurology and Psychiatry*. He is one of the world's top authorities on pain. For years he and his staff at New York Hospital have been studying headaches, backaches, stomachaches, and muscular pains of all varieties. From his research has come the conclusion that pain itself causes far less discomfort than what we think about pain as we experience it. The most intense pain that any human ever suffers in a lifetime, for example, is the pain of childbirth, which countless women survive and even seek because of the happiness that particular pain brings.

In the course of his work, Dr. Wolff has subjected himself to pain from heat and other external stimuli. But what he has learned appears to make him immune from any aches that may arise from the nervous tensions of his own extremely busy life. He is on the staff of half a dozen scientific journals, serves on a dozen national medical committees, is active in twenty-seven different medical societies, is consultant to three metropolitan hospitals in addition to his responsibility at the Cornell-New York Medical Center, and frequently lectures throughout the United States and Europe. All this is aside from his domestic function as amateur critic of the paintings of his wife, artist Isabel Bishop. Yet, as the photo shows, he looks boyish at the age of fifty-eight.

Dr. Wolff refers to a Study Program in Human Health and the Ecology of Man in the accompanying article. This involves the medical life histories of thousands of telephone operators. Why telephone operators? Because they are one of the few groups whose working conditions can be compared with a good degree of accuracy, and also one of the few groups for whom regular medical records exist over long periods of time.

What Dr. Wolff has written in these pages is a distillation of decades of laboratory and clinical experience. He first put it into words in a talk at Charter Day exercises marking the 185th legal birthday of the Society of the New York Hospital on May 8, 1956.

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He's subdued, but not his stomach.

him to make this adaptation. Since the situation cannot be resolved in this way, the organ or part may be damaged and sometimes even jeopardize a man's life.

Rapid and violent social change may also be a serious threat. Nearly twenty-five centuries ago Hippocrates reminded his contemporaries of the risk of such changes when he said, "Those things which one has been accustomed to for a long time, although worse than things which one is not accustomed to, usually give less disturbance."

An amusing observation relevant to the effects of change was made on Hopi Indians. The young Hopi, American schooled, may be contrasted with his father. His father believed that when he trod on the track of a snake he would get sore ankles unless he took himself to the medicine man, who by incantation could prevent this. This he believed without question, and by acting so, his ankles were not sore. In contrast, his American-schooled son, no longer believing in the powers of the medicine man (considering him a humbug), nonetheless gets sore ankles after walking in the track of a snake. The implication is clear. In a rapidly changing society, anxiety-inducing factors outlive anxiety-resolving factors.

Is there evidence that these disruptive changes may be relevant to disease? Is it fortuitous that in a given society mortality from tuberculosis reaches its peak within ten to twenty years after industrialization and thereafter falls off rapidly? Is it meaningless that when populations are moved, trouble ensues? When a sizable block of Ireland's population emigrated to American seacoast cities they were better fed, had more opportunities for work, were titillated by many novel experiences, and had more promise for the future. Yet, the death rate from tuberculosis among the Irish in New York City, for instance, was 100 per cent greater than it was at the same time in Dublin.

Is it an accident that far greater numbers of American Indians died from tuberculosis when they were moved from the plains to reservations in miles not very far distant? Or that tuberculosis killed hordes of Bantu natives, moved from the country outside of Johannesburg into the environs of the city? Some of them, told that they were about to die, asked to be sent back to their *kraals*. Many died, a few survived, but tuberculosis was widely spread by them in the native villages. Interestingly enough, deaths from tuberculosis did not vastly increase with such spread, suggesting that the Bantus in their native environment could deal better with the infection.

Again we ask, is it without larger significance that the incidence of hyperthyroidism in Norway increased 100 per cent during the first year of World War II when that country was invaded? Is there nothing to be learned from the fact that periods of great duress bring about the decline of some diseases while others increase? Thus, successful Dutch merchants who had peptic ulcers before incarceration in German concentration camps lost their stomach lesions under the horrendous conditions that augmented other diseases. Sadly, I add, many regained their peptic ulcers upon returning to Main Street.

Recently answers to some of these questions have been sought. A large scale study of men and women in the context of their environment, and its pertinence to their health, has been made by a group working in the Human Ecology Program at the New York Hospital. In this research the life stories of approximately 3,500 ostensibly healthy people were analysed. These included not only Americans, but also an homogeneous group of foreign-born persons with an entirely different cultural tradition. Several striking generalizations came from these studies.

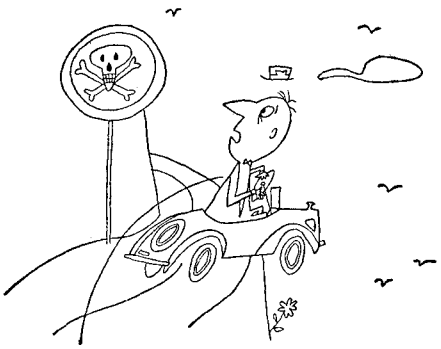
Illness was not spread evenly throughout the population. Indeed, about one quarter of the individuals account for more than one half the episodes of illness. There were more than twenty times as many episodes of illness in the least healthy members of the group as compared to the healthy members. Thus, some individuals had as little as ten days of absence from work because of illness in twenty years, and others more than 1,300 days in the same length of time.

The persons with the most illness also had the widest variety of illnesses. To be emphasized is that illness included all categories not only major and minor, but medical, surgical, and psychiatric diseases, including infections, injuries, and new growths.

The episodes of illness clustered; that is, there were many episodes occurring in one or more particular years, contiguous with other periods during which few or no illnesses occurred. For example, a given man during his earlier life had at the same time disorders of respiration and digestion, and a serious infectious disease. A later cluster of illnesses in the same person included disorders of the liver, the heart, the glands of internal secretion and of respiration. In both clusters he showed disorders of mood, thought, and behavior. The clusters of illnesses of all sorts predictably occurred during those periods of life perceived by the subject as stressful. No satisfactory adaptation to meet these situations was worked out, and inappropriate patterns of response were used.

On the other hand, the well person was one who felt able to handle the demands of his environment, was stimulated by hindrances and whose conflicts and feelings of guilt were not sustained unduly. Change as it arose was dealt with directly. The same was true of the sick individual during his better periods.

WHAT reference have these points to survival or to death? Our study is still too young to answer this question.



He was warned right off the road.

But there are hints from other sources that years of life can be pressed out of man by catastrophe or prolonged duress. Most physicians have seen sudden and unexplainable death come to those who are overwhelmed or filled with despair. There is good evidence that "bone pointing," "hexing," and excommunication of transgressors of tribal mores may remarkably shorten life if not immediately kill a man. Suitable studies have not been made until now to explain such deaths. However, it has been shown that wild rats capable of swimming for ninety or more hours may, nevertheless, when terrified and then plunged into water die in a few minutes. Careful study of the heart in these

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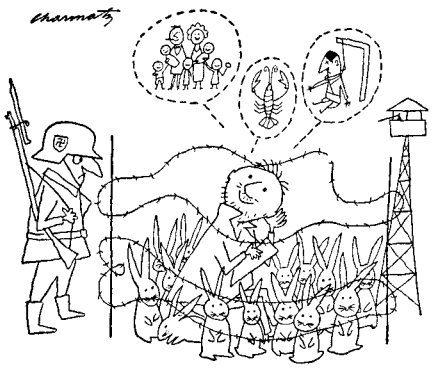
creatures reveals that death results from a depressive action of the nervous system, gradually slowing and ultimately arresting the heart's beat. Moreover, if lifted out of the water just before the heart stops the rat promptly recovers, and on subsequent immersion swims as it did before this crisis.

Early information from Japan, as yet statistically unsupported, indicates that those who experienced the catastrophe of the atom bomb at Hiroshima, but who suffered no burns or direct effects of irradiation, have had a shorter life span than other Japanese. Death has resulted from the usual and varied terminal illnesses. It is as though they had grown twenty years older than their age.

Though we lack definitive support for this early impression, we do have precise information from our own records of the war concerning the effect on life span and health of prolonged adverse life experience. Thus, of opproximately 6,000 United States prisoners of war captured by the North Koreans, about one third died. Medical observers reported that the cause of death in many instances was ill defined, and was referred to by them as "give-up-itis." Occurring as it did in a setting of serious demoralization, humiliation, despair and deprivation of human support and affection, the prisoner became apathetic, listless, neither ate nor drank, helped himself in no way, stared into space and finally died.

A recently completed study of the effects of imprisonment on Americans during World War II tells us that approximately 94,000 United States prisoners of war were taken in Europe. These men were imprisoned about ten months. Less than 1 per cent of them died before liberation. In contrast, in the Pacific theater, about 25,000 Americans became prisoners of war. They remained in prison four times as long as those captured in Europe, and suffered far more than any others the effects of threats, abuse and humiliation. Their demoralization was often extreme. Over one third died before liberation.



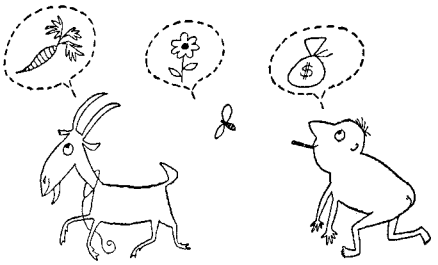
Hope can't be entangled.

Six years after liberation, those who survived the Japanese prison experience were re-examined. In the first place the total number of deaths in this group during these six years was more than twice the expected incidence for a similar group of persons not so exposed, and three times as great as in the group of United States prisoners of war in Europe. The causes of death included many diseases not directly related to confinement or starvation. Thus, nine times the expected number died of pulmonary tuberculosis, twice the expected number died of heart disease, more than twice the expected number of cancer, more than four times the expected number of diseases of the gastrointestinal tract, twice the number from suicide, and most striking of all, three times the expected number of deaths as a result of accidents.

WHAT happened to those who survived? What was the incidence of illness during the six years after their liberation? It was found that the admission rate to veteran's hospitals of the former prisoners of war of the Japanese was closely related to the amount of stress endured by the former soldier during his imprisonment. Those who had experienced less duress had admission rates only slightly more than the European prisoners of war, whereas those who had suffered greatly had far the greatest number of admissions, amounting to seven times as many as did those who had not been prisoners, and "very poor health" interfered with work in one half. Interestingly enough, as in the group of 3,500 persons studied in the previously cited Human Ecology Program, those who were in "very poor health" had many different diseases including those who did not appear to be immediately related to incarceration, i.e., hernia, deafness, and diseases of bones, muscles, and heart. There were ten times as many "impairments" as among the European prisoners of war group.

What about the rest who neither died nor became sick or disabled? Again facts run out. But a study of a few of the survivors who have since become unusually effective citizens is suggestive. Despite exposure to many stressful conditions, the imprisonment for them was a painful but temporary interruption in a life viewed as a continuum. They were convinced that they would come out alive and that they would not be imprisoned long. They were able to extract a few satisfactions even while enduring deprivations. New interests were cultivated (one man raised rabbits for food and began breeding them for increased size). Mind and spirit were mainly focused on life as it was to be lived in to the future. The immediate distress seemed less real; the future more substantial. Plans were made for occupation, marriage, family, children, often with meticulous and obsessive detail, including domicile, city or town, education for self and kin, entertainment, the kind of food and where it would be eaten. Among these prisoners academic courses were organized, teaching carried out, seminars and discussions led. These men formed tightly knit groups, believed in, helped each other, and even laughed together. Immediately after liberation, a few had transient illnesses, but there is little to indicate that their vitality has been sapped. Indeed, a few have assumed major responsibilities.

In short, prolonged circumstances which are perceived as dangerous, as lonely, as hopeless, may drain a man of hope and of his health; but he is capable of enduring incredible burdens and taking cruel punishment when he has self-esteem, hope, purpose, and belief in his fellows.



Dollars can be indigestible.

If the data have been presented clearly, it should be evident that disease is closely linked with efforts at adaptation. On a simple biologic level, disease can mean that attempts at adaptation have over or undershot the mark. On the level of man's elaborate nervous equipment, responses which result in disease may be inappropriate in kind as well as in amount.

Man meets threats, assaults, and crises and as well strives to fulfil his potential, using his faulty adaptive patterns. He may find that many ends are more important than comfort, a few more important than health or even than personal survival. It is well, however, that we examine our means of attaining those ends, and that we know as far as we can the price of our values.

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ALPHABET OF LIFE

By H. JACK GEIGER

NO ONE yet can write an equation and say, "This is life." No one yet can parse the magnificent chemical poetry that transforms a single small and rather slimy cell, a granular speck of jelly, into a human baby. But chemistry and physics, the sciences of inanimate matter, are coming to grips with the mystery of living. Biology, which began as the study of intact creatures, then became the study of organs and tissues, then of individual cells, now is increasingly the study of the whirling, shifting patterns of chemical molecules within cells. And it is on this molecular level that the great cycle of life—birth, growth, reproduction, aging, and death—will find ultimate explanation. In the new biology, molecular biology, man may discover the alphabet in which his very being is written.

Already four letters of this alphabet appear to be dimly distinguishable. They all are roughly ringed in shape, as though life were nothing more than a succession of exclamatory O's! The four are sub-molecules of a chemical with such a jawbreaking name (de-oxy-ribose nucleic acid) that scientists call it DNA for short. The word nucleic is part of the name because the acid is in the nuclei of all cells. The sub-molecules we are talking about here are: Adenine, Guanine, Cytosine and Thymine.

Prosaic chemical names these are, but there is wondrous poetry in them. For if present scientific speculation is correct, these four cabalistic characters together read: life. They, and apparently only they, appear over and over again in infinitely varied order down the long length of the nucleic acid molecule that constitutes a gene. As the dots and dashes of telegraphy form meaningful messages, so the endlessly varied sequences of Adenine, Guanine, Cytosine and Thymine may form a chemical code for life.

Through heredity (and the genes are the carriers of heredity from cell to cell and generation to generation), big differences in the sequence of these four characters could spell out the differences between species. Smaller differences could be the synonyms for the variations within a species which make us individuals.

"It's the nucleic acids," Dr. Dean Fraser of the University of California once remarked, "that account for the difference between Jack the Ripper and a buttercup, that distinguish between the potential of an Einstein and the village idiot."

Nucleic acid is all that can be found inside a bacteriophage whose behavior occupies the curiosity of Dr. S. E. Luria, a short, bouncy, intense professor of bacteriology at the University of Illinois. Bacteriophages are a kind of virus. They are related to the same enormous family of viruses that give us the sniffles, the flu, polio, rabies, measles and a half a hundred other ailments. But bacteriophages are white sheep in the blackguard virus family. They cause no known human disease. They attack only certain kinds of bacterial cells. They are valuable to man because, in acting much like the dangerous viruses, these innocents tell the inside story of what a virus does to a living cell. Since they consist largely of nucleic acid, they give us a chance to con the grammar, the material alphabet, of life's chemical language.

A year or so ago, at a briefing session with a group of science reporters in Chicago, Dr. Luria spent the better part of a morning describing, in his own particularly vivid way, some of the important bacteriophage findings of his own and other laboratories. Here are the highlights, transcribed from a reporter's rough and hasty notes:

"Let's look at a particular bacteriophage virus. He has a six-sided head and a little tail—all made of protein—and he is about a hundred-thousandth of an inch long. His insides consist of a single chemical, that very complicated chemical called nucleic acid.

"Now along comes a bacterium: next to the virus, a monster in size. The bacterium is happily taking in food, breaking it down, building it into bacterial proteins, replacing worn-out bacterial parts, maybe getting ready to divide into two bacteria. His metabolism, in short, is bacterial metabolism, just as it should be.

"Here comes our virus. He backs up to the bacterium, tail first. He has a kind of chemical drill—an enzyme—that makes a hole in the bacterial cell wall. He squirts in his nucleic acid, nothing else. He leaves his empty protein overcoat outside.

"What happens? Nothing. The bacterium looks the same. We wait. Perhaps 15, perhaps 30 minutes. Then—bang! The bacterium bursts and falls into shreds. In the place where the bacterium had been are 50, 100, 200 new viruses, all looking for new bacteria to infect."

Even this much makes an astonishing story. An apparently lifeless chemical, the nucleic acid, goes in; a whole generation of complete new viruses comes out. Delicate studies of the intervening process have made clear that the virus does not reproduce itself. Instead, it somehow forces the *bacterium* to do the work—to stop its normal metabolic tasks and make, out of its own substance, new virus components. It is as if a robot invaded a Chevrolet factory, stopped the assembly lines, and re-tooled them to turn out new robots instead of Chevrolets.

Sometimes something even subtler happens. Dr. Luria continues:

"Now we take different bacteriophage and another bacterium. The same process of drilling occurs. Again, the nucleic acid goes in. We wait. This time nothing happens. The bacterium grows normally. It divides. Its daughter cells grow and they divide. We watch through 40 or 50 generations. Suddenly, then, one of the remote descendants of the original infected bacterium explodes and out come a horde of new viruses just like the great-grandfather virus that made the original invasion generations earlier.

"We take a third case. This time the virus invades a diphtheria bacillus, one that usually manufactures and excretes a poison. Nothing happens that we can see, but the bacillus stops making the poison. And when that bacillus divides, its descendants don't make poison, either!

"Infection has caused a hereditary change. Imagine an infection that changed an animal's eye from brown to blue—and compelled the eyes in all its descendants to be blue. This is more than infection. This is infectious heredity."

WHAT happens in these cases, Dr. Luria believes, is that the nucleic acid, which is the "living" part of the virus, enters the bacterium and heads straight for the nucleus of the bacterial cell. Here it finds the genes, the chemical structures that are believed to direct the cell's metabolism. Ensconced among the genes, the nucleic acid from the virus sits down and starts behaving like a gene.

It may give chemical orders that compel the production of new virus particles. It may direct just one metabolic activity, poison production, for example; or the use of sugar for food; or the building of immunity to infection by other viruses.

If this is so, then a virus is—in a sense—a free-floating hunk of hered-

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ity, an isolated paragraph of chemical code looking for a cell in which it can spell out its power. For genes are more than chemical blueprints that run a cell; they are also units of heredity. Before a cell divides, an exact copy of each gene is made, then handed on to the daughter cells, thus ensuring that the offspring will have the same characteristics as the parents. If the nucleic acid of the invading virus behaves like a gene, then perhaps each time the bacterium divides, the invader, too, divides and passes into the daughter cells. It may remain, for many generations, as a relatively harmless passenger. But through all these generations the cells of the bacterium are carrying the seeds of their own ultimate destruction within them.

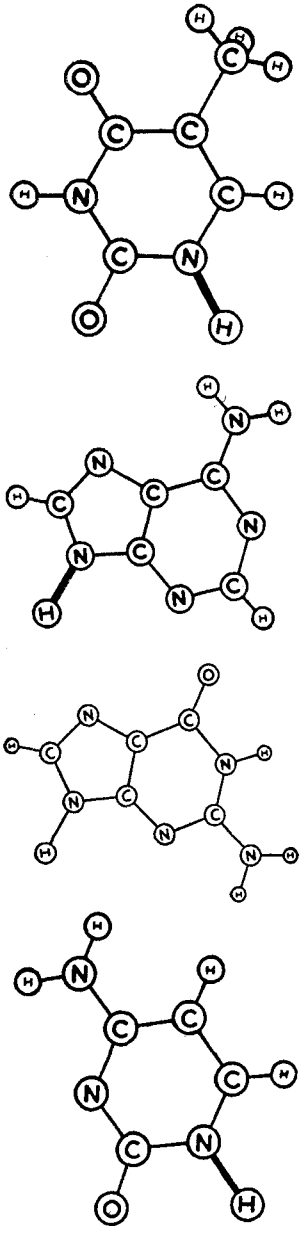
All this is, of course, in considerable measure theoretical. But it is easy to believe that the virus nucleic acid acts like a gene. Because the bacteria's own genes, and the genes in almost every cell of every living thing on earth, are made of nucleic acid, too.

There is one more crucial point in the story Dr. Luria and other virologists tell. They have learned that they can shorten the latent period—the span of generations during which the virus nucleic acid travels innocently and silently through the host cell and all its descendants—by applying various stimuli to the cells. These external "triggers" suddenly cause the latent virus to become active, to dictate the immediate production of new virus particles, and thus to cause the cell's ultimate disintegration.

Among the "triggers" that work best are nitrogen mustard, x-rays and ultra-violet rays. These are the same agents which, when applied uncritically to normal cells, are potent causes of cancer.

Could it be that some "normal" cells really harbor hidden viruses, and that all carcinogens (cancer-causers) work by provoking these viruses into action: an action characterized by the wild, uncontrolled cell growth and division that is cancer?

It is now known that some cancer cells do have abnormal nucleic acid patterns, and that cancer-causing agents always seem to affect the normal cell's nucleic acid during the conversion to malignancy. It would be easy to think of viruses entering a normal cell, changing it into a malignant cell, and, by "infectious heredity," making all its descendants malignant. It would be easy to think of viruses invading a malignant cell, interfering with its production of abnormal nucleic acids, and thus killing it. In each case, the invasion would really be the addition of new nucleic acid to the cell's genes. As the addition of a word can change the meaning of a sentence, so might the new Adenine-Guanine-Cytosine-Thymine change the cell's character.



Here are the four known symbols of the cryptic code in which the mystery of life appears to be written. From top to bottom: Thymine, Adenine, Guanine, Cytosine.

Again, these are speculations. The facts are now being determined in the molecular biology laboratories.

The research frontier now is on that molecular level. Chemist Linus Pauling and his colleagues already have traced half a dozen kinds of anemia to molecular abnormalities, peculiar forms of the oxygen-carrying hemoglobin molecule in the red blood cell. Since some of these anemias are hereditary, the imperfect hemoglobin must be synthesized under the direction of a variant gene, a disordered nucleic acid, a wrong font in the type case of life.

In New Orleans, Dr. Robert Heath has found a strange, abnormal protein in the bloodstreams of a few schizophrenics. This is a twisted molecule which, if injected into the bodies of normal volunteers, gives them temporary signs of schizophrenia.

The way in which these typographical errors originate and perpetuate themselves will not be clear until the scientist can learn, in clear-cut chemical language, *what* a gene is, *how* it controls metabolism, and *how* it guides heredity. Many researchers feel that these are the most fundamental questions in science today.

THERE are a few tentative answers to these fundamental mysteries. It seems likely that the nucleic acids direct a cell's metabolism by determining what enzymes (protein molecules that act like machine tools for the cell's chemical assembly-lines) each cell will have. The genes may do this by serving as actual molds for the synthesis of enzyme molecules. Given the same enzymes, daughter cells will have the same metabolism.

But metabolism is the mechanics of living. Is nucleic acid a living thing? What do we mean by "living"? Given the right environment, nucleic acid can duplicate itself or reproduce; it can fashion the enzymes and other proteins that are essential tools for life; it can provide continuity from generation to generation. Yet viruses which contain it can be concentrated and purified, bottled and stored on a deep-freeze shelf like any chemical, showing no more sign of life than a tablet of aspirin. When this bottled stuff is taken off the shelf and rubbed (for example) on the leaves of a tobacco plant, the inert something flames into activity, attacks and multiplies with savage speed, kills its host, and spreads to new plants from which it can again be extracted, bottled, and put back on the shelf.

Was nucleic acid the first self-reproducing system to appear on earth? Was the virus the first and most primitive form of life? Or was it once a gene among other genes of some bacterium, suddenly detached and turned into a wandering prodigal son, destined always to return to the home of its ancestors to reproduce?

If the hunches of molecular biologists are right, it is the nucleic acid of the human egg cell that guides the egg unerringly on its incredible course. Using a cryptic language all its own it somehow communicates orders to the growing embryo, in watery darkness, to fashion an eye; in silence, to construct instruments of voice and hearing; in dumb, insensate isolation, to form an outsized brain that will one day, perhaps, ponder the world, peer into the nucleic acids, and search there for the secrets of its own existence, the alphabet of its own life.

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PERSONALITY PORTRAIT—X

Dr. Lawrence R. Hafstad.

THE ATOMIC FURNACEMAN

THERE is one aspect of the Suez crisis on which no difference of opinion whatever exists between Great Britain and the United States. Both nations read the dilemma as a warning that peaceful atom power must be hurried. Not only must ships be freed of conventional fuel which shortens their cruising range, but cheap power must be packaged in easily movable form to transform the wastelands of earth's poorer peoples.

Within the space of a few days in mid-December, plans for increased numbers of A-furnaces were reported on either side of the Atlantic, one announcement being made to the House of Commons and the other to the American Nuclear Society by Atomic Energy Commission Chairman Lewis Strauss. It may be something more than symbolic that one of the engineering firms involved in the British expansion is Babcock and Wilcox, which holds the first A-turbine contract for a merchant ship in this country. The ship, which could just as well be an oil tanker, will set a notable precedent in that its A-powered turbine will be built *at a fixed price.* Most past atomic work has been done at government risk, with contractors guaranteed costs plus profit.

The man most responsible for bringing atomic science to the stage where such a gamble is feasible in America is Dr. Lawrence R. Hafstad, research vice president for General Motors.

"Larry" Hafstad was one of three researchers (the others were Drs. Richard Roberts and Merle Tuve) who confirmed the fission of uranium for the first time in the United States in 1939. In 1949, he became the AEC's first director of A-furnace research and development. From then until his resignation in 1954, all the major patterns of A-furnace design—solid and liquid fueled, plain uranium burners and plutonium breeders—were drawn and put through preliminary screening. It was under his egis that an A-furnace first generated electric power at Arco, Idaho. And he was finally responsible for putting Westinghouse to work on America's first full-scale A-powered generator of electricity for the Duquesne Light network outside Pittsburgh.

A rare blend of human warmth and sincerity, pure scientist and teacher, good mixer of abstruse theory with practical nuts-and-bolts, respectful alike of earthy engineers and dreamy longhairs, pleasant-natured "Larry" has always maintained that the principles of atom power are "much simpler than trying to understand why electricity works the way it does." "Every time I plug the radio into the wall," he says, "I marvel that music comes out."

Perhaps as much for his humility as for his genius, Hafstad was honored on the night of December 27 by the American Association for the Advancement of Science. His award: $1,000 cash and a certificate naming him as winner of the 1956 William Proctor Prize for Scientific Achievement. Donor of the Proctor Prize is the Scientific Research Society of America, which was created by the scholastic science fraternity Sigma Xi in 1950 for the purpose of extending Sigma Xi's recognition of research excellence from the universities into government and business laboratories. SRSA has 5,000 members in forty branches throughout the country. The fame of its previous Proctor Prize winners—physicist Karl Compton, atom-smasher Ernest Lawrence, pathologist Shields Warren, bridge builder David Steinman, engineer Vannevar Bush, and Robert Williams, synthesizer of vitamin B—leaves no doubt of the status intended for Hafstad.

This is not the first time that "Larry" Hafstad has heard the hurrahs of his peers in science. When the Proctor Prize ceremony took place, he already held the Medal of Merit, the Distinguished Service Award of the AEC, and a AAAS prize for sharing development of the million-volt vacuum tube. Perhaps the murmur of applause will be heard by the 2,500 high school pupils who last spring, in response to a poll by Purdue University, put atom science at the bottom of their list of preferred careers.

For their enlightenment, it ought to be said that Hafstad has lived the great American tradition from the time of his birth in 1904 in Minneapolis. He worked his way through high school and the early years of college as a telephone lineman. After shinnying up to the top of the pole, he saw far visions which he brought into focus in his own life.

First came a doctorate in physics at Johns Hopkins, then a staff position at the Carnegie Institution, after that the secretaryship of the Joint Research and Development Board, then the job with the AEC, a place with Chase National Bank, and now the research vice presidency of General Motors in Detroit.

"ONE can certainly select an easier way of making a living," he said recently. Hard work, patience, curiosity, courage to think independently are the principal ingredients he gives for a life's work like his own. And the satisfactions?

"The privilege of working on the frontiers of knowledge . . . I never knew a true scientific explorer who was bored." —J. L.

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THE RESEARCH FRONTIER

WHERE IS SCIENCE TAKING US? *Research often leads in directions quite different from the one first intended by a curious experimenter. Nevertheless, every scientific inquiry must begin with a question. Why this? How that? What if? The Editors have invited scientists to suggest new areas for fruitful research. Answers will appear on this page as they are received.*

DR. HARVEY GOERING *(Battelle Memorial Institute):* The process originally developed and currently being used to purify semiconductors (the materials used in electronic transistors) appears to have far wider potentialities. This process is called "zone purification" or "zone melting." It is an ingenious method whereby a solid mass of material is progressively melted, with the melted section (zone) moving gradually through the mass. As melting occurs at the forward edge of the zone, freezing takes place on the opposite edge. Impurities in the material are usually more soluble in the molten state, so they migrate with the molten zone. In effect, they are swept from the interior of a solid substance. Just as dirt and debris pile up in front of the housewife's broom, the impurities pile up ahead of the swept section within the solid, leaving the zone behind the scientific broom extremely clean. Whereas purities of 99.99 per cent are normally considered excellent by other methods, the zone melting method has made semiconductor materials to a purity of 99.999999 per cent. And the method has many other industrial possibilities which scientists are just beginning to explore. I believe the process is feasible for purifying metallurgical ingots as heavy as 1,000 pounds. In large-scale applications, continuous processing may be practical—that is, the purified product would be continuously withdrawn from the system at one point, with the material containing concentrated impurities withdrawn at another point. Since water is already molten, or liquid, sea water might be progressively frozen, thereby sweeping out salt and leaving fresh water, at the same time concentrating the numerous valuable chemicals that are always present in the sea.

R. E. GIBSON *(Applied Physics Laboratory, Johns Hopkins University):* We discuss the effect of various relationships of the universities with industry and government as though that were an end in itself, whereas the real end is the economy and the security of the people as a whole. We who represent universities, government, and industry all have a job to do for a larger audience, namely the people of the United States as a whole, or farther than that.

I have seen many papers—and good ones, too—published with a byline, "Supported by the Office of Naval Research," or "Supported by the Bureau of Ordnance," or "Supported by the Army," and so on. Have we added up the contributions to knowledge and research that have come out of these programs? In our audit, have we seen whether we really have added to the fund of knowledge and also to the supply of (well, I won't say trained) well-educated men? Do we have any data on that?

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SCIENCE IN BOOKS

THE SCIENCE OF ART

THE concept of form is one of those rare bridges between science and art. It is a name we may give to the source of esthetic delight we all sometimes experience when we have found a "neat" mathematical solution or when we suddenly "see" broad relationships in what has hitherto been a mass of isolated facts. Form essentially emerges from the continual play of governing conditions or "law." An artistic mode of expression, such as music, painting, sculpture, represents a "language"; through this means the artist communicates with us. His creation has form inasmuch as it represents a continuity of his past experience and that of others of his time, so long as it obeys some of the "rules." It has meaning for us if it represents a continuity and extension of our own experience.

Pictures and sculpture may be regarded as signs. But pictures are not true copies, not duplicates of real scenes and people; portraits are not models or duplicates of people's faces —not even in the sense that a photograph is a one-to-one, two-dimensional projection. A portrait acts as an icon by virtue of certain inherent attributes or characteristics. We may be so accustomed to the classical paintings of Gainsborough and Watteau as to imagine that they are "natural" or "life-like," but a moment's thought and close examination show many distinctions from reality; and there is a continuity of artistic development from their time to, say, the "unnatural" cubists. The more we comprehend the past, the better we apprehend today.

Every individual word in a passage of prose or poetry can no more be said to denote some specific referent than does every brush mark, every line, in a painting have its counterpart in reality. The writer or speaker does not communicate his *thoughts* to us; he communicates a representation for carrying out this function, under the severe discipline of using the only materials he has, sound and gesture. Speech is like painting, a representation made out of given materials —sound or paint. The function of speech is to stimulate and set up thoughts in us having correspondence with the speaker's desires; he has then communicated with us. But he has not transmitted a copy of his thoughts, a photograph, but only a stream of speech—a substitute made from the unpromising material of sound.

The artist, the sculptor, the caricaturist, the composer are akin in this, that they express (make representations of) their thoughts using chosen, limited materials. They make the "best" representations, within these self-imposed constraints. A child who builds models of a house, or a train, using only a few colored blocks, is essentially engaged in the same creation.

A printed text is not simply a chain of individual words, picked one at a time; it is a whole. It has a structure, but it has meaning for us only if it represents a continuity of our experience. A text in some strange foreign language sets up an abrupt change in our experience, a discontinuity, and we make nothing of it. Given a translator's dictionary we may decipher some of the words and attain some understanding, though this understanding through translation has been achieved by projecting the text onto our own language; that is, we are looking at it with the eyes of our English-speaking culture. A grammar book may help us to decipher the text more thoroughly, and help us comprehend something of the language structure, but we may never fully understand if we are not bred in the culture and society that has moulded and shaped the language.

Clearly, such difficulties with foreign languages do not enter into the translation of simple direct statements, such as we meet when traveling abroad. "*Non sputare nella carroza*" or "*Rechts fahren!*" have very direct interpretations! Again, it is a major triumph of science to have evolved a language largely independent of culture. But the majority of texts use language with much greater subtlety, and understanding is far less readily attained. The full effect of a word upon its hearer may depend not only upon the context but upon the whole physical and psychological environment and, on many occasions, upon his experience of the culture of which the language forms an integral part. The study of language (linguistics) has both its scientific and esthetic sides, and partly for this reason it is a most valuable study.

Dualism, or twin-thinking, seems to be a natural human quality. Controversies continually rage: science versus humanities as a vehicle of education, technology and the arts, the material and the spiritual. Yet in truth the cleavage is never perfect, the two sides are never complete in themselves. The division is a convenience but is not part of the structure of the world. In the study of language the nullity of any such divorce is made particularly prominent.

The artist is sometimes offended by what he imagines to be the scientific view and the scientific use of language; the converse attitude, too, is by no means unknown. But writing poetry and writing *about* poetry are different activities; and the scientific analysis of language is not to be confused with literature. The scientist prides himself that he uses words in a special way; that he chooses them, not for their emotive value, or for their beauty of sound patterning, or in any way private to himself, but rather in conformity with a public use amongst all his fellow scientists. That is, scientific language has a *public* utility, whereas poetry may have significance which is personal to the reader. This scientific language is relevant only to the *corpus* of the scientific structure; but its rigid discipline need not restrict the freedom of the scientific writer in his desire to communicate his ideas to others. The writer may use all his powers of persuasion, all his wit and imagination, to clarify and convince—only the nucleus of scientific concepts require strict adherence to the "public" scientific language. A scientific treatise can well be a work of art, too; and indeed we have a great inheritance in this respect which no young scientist can afford to overlook.

—COLIN CHERRY, *in "On Human Communication" (John Wiley and Sons—Technology Press of MIT).*

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KINGSLEY DOUBLE-CROSTIC NO. 1189

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By Doris Nash Wortman

DEFINITIONS

A. Correct living, normal life.

B. Edible fruit of a Chinese tree (one of several possible spellings).

C. A poor person's one prized possession (2 wds.).

D. That "Calender" which Spenser wrote about; former famous hostelry in Egypt where everybody one had ever known was supposed to pass by if one waited long enough.

E. Polish author ("Beasts, Men, and Gods"; 1876—).

F. Mark in a table of logarithms, indicating change of the figure in a decimal place.

G. Term in heraldry for flaming.

H. In the Bible, Jacob's ninth son, ancestor of one of the Twelve Tribes.

I. Gas-meter "cap" designed to give specific flow per unit of time, etc.

J. Supreme test of Hindu wifely excellence now long forbidden by government of India.

K. Year in Twentieth Cent. when Word L was discovered.

L. Discovery by C. W. Tombaugh after 25 years of prediction and research.

M. A severe critic, named for a Greek grammarian of 200 B.C.

WORDS

99 154 70 112 12 53 122 81 120 39 184

50 145 170 86 151 129 116

73 85 51 95 113 14 89

102 124 139 41 17 188 66 60 169 158

27 137 91 38 63 77 84 107 69 25 48

142 76 97 37 134

58 156 9 40 182 148 144

67 171 159 19 133 8 130 83

168 108 114 42

15 153 172 180 93 26

47 72 36 181 7 6

185 54 35 123 160

16 82 147 146 10 87 31 187 126

DEFINITIONS

N. World-famous personage of 15th cent. whose real family name was Gensfleisch, though he chose to be known by his matronymic.

O. Constituent part of anything.

P. Inferential.

Q. Given name of Mrs. Rudolph Valentino.

R. The "Angelic Doctor" (13th cent.).

S. Vocable formed and used for one particular occasion but not introduced into the language (2 wds.).

T. Honorary title given to descendants of Mohammed through his daughter Fatima (one of several spellings).

U. English diplomat of 16th cent. who urged Sir Walter Raleigh to pillage Spanish settlements in S. Amer.

V. Obliterate; erase; expunge.

W. Daughter of Shakespeare's "Cymbeline."

X. Small bulbous glass vessel, hermetically sealed, usually holding one dose for hypodermic injection.

Y. Nowadays an organized series of races founded on a simple gondola race in Venice.

Z. Swiss bacteriologist who discovered plague bacillus, Hong Kong, 1894, and developed a protective serum for it.

WORDS

59 55 125 29 100 49 32 161 155

3 106 62 80 110 177 71

21 105 183 186 1 173 109 127

28 164 136 178 128 2 149

52 34 167 96 150 157 179

94 152 135 44 61 131 75 117 20

45 103 18 119 56

121 141 174 74 166 13 4

165 98 11 33 111 138

24 140 79 65 132 88 163

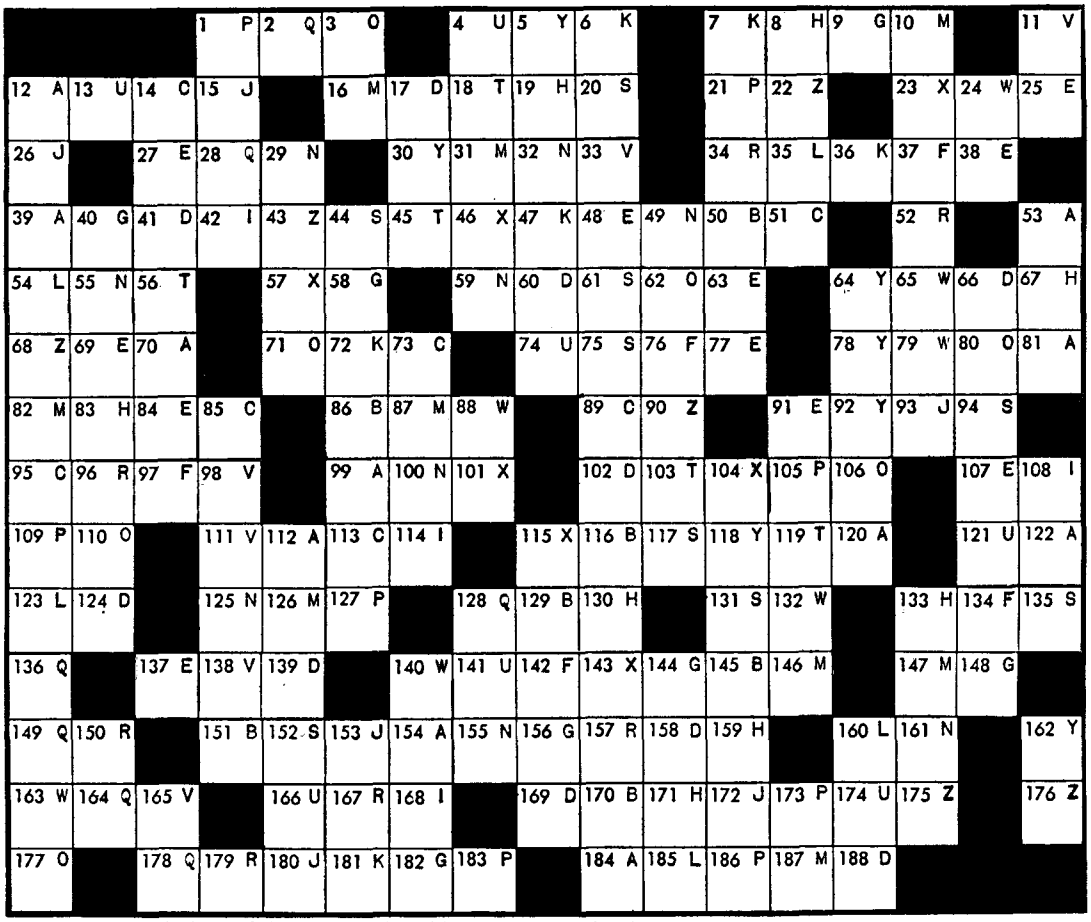
104 115 46 57 143 23 101

162 92 118 5 30 78 64

175 90 43 22 176 68

DIRECTIONS

To solve this puzzle you must guess twenty-odd WORDS, the definitions of which are given in the column headed DEFINITIONS. Alongside each definition, there is a row of dashes—one for each letter in the required word. When you have guessed a word, write it on the dashes, and also write each letter in the correspondingly numbered square of the puzzle diagram. . . . When the squares are all filled in, you will find that you have completed a quotation from some published work. If read up and down, the letters in the diagram have no meaning. . . . Black squares indicate ends of words; if there is no black square at the right side of the diagram, the word carries over to the next line. . . . When all the WORDS are filled in, their initial letters spell the name of the author and the title of the piece from which the quotation has been taken. Of great help to the solver are this acrostic feature and the relative shapes of words in the diagram as they develop. Authority for spellings and definitions is Webster's New International Dictionary, Second Edition.



Solution of last week's Double-Crostic will be found on page 6 of this issue.

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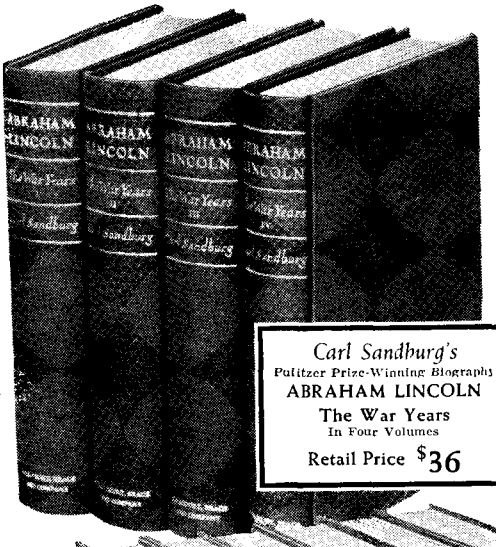

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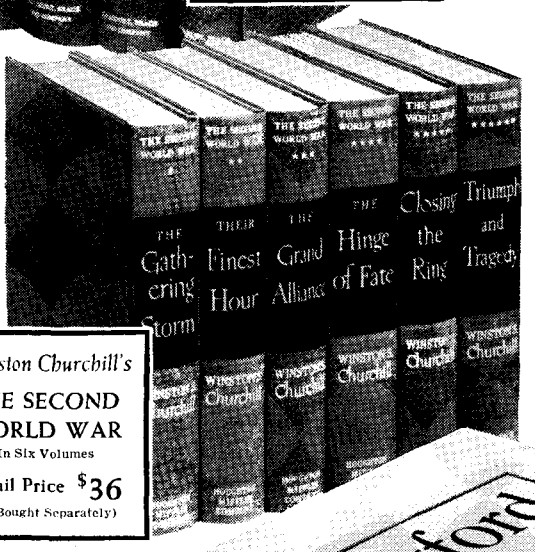

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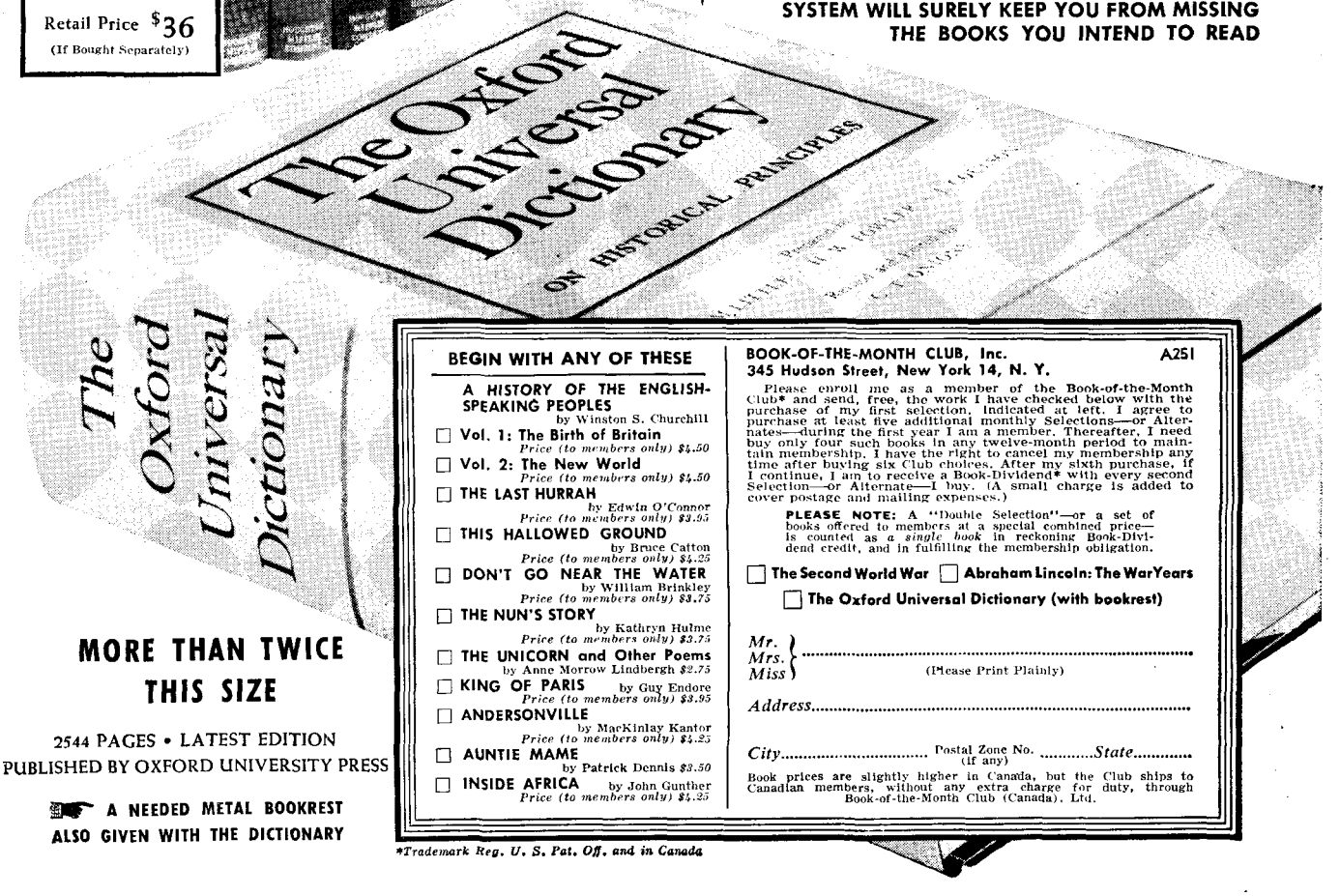

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